

JOURNAL OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

3rd Series)

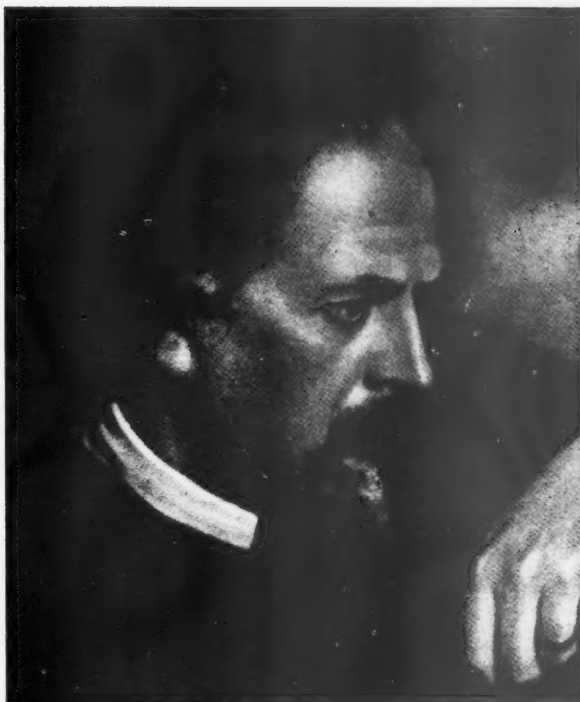
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Victor Vesnin, President of the U.S.S.R. Academy of Architecture who has been awarded the Royal Gold Medal for Architecture, 1945

Journal

AN AMERICAN LOOKS AT BRITISH HOUSING

On 2 January at 5.30 p.m. Mr. Jacob L. Crane, Assistant Administrator of the National Housing Agency and Director of Urban Planning in the United States, will lecture at the R.I.B.A. on his impressions of British Housing.

Mr. Crane is one of the most important town-planning visitors we have had to this country during the war. In the United States his position is equivalent to Ministerial rank in Britain and he has come here at the joint invitation of the Ministers of Health and Town and Country Planning to make an intensive study of all our housing and planning activities. As can be imagined, Mr. Crane has been flooded with invitations to speak but has decided that rather than disperse his observations over a large number and variety of meetings it would be better to round off his trip with one really comprehensive survey and discussion. The R.I.B.A. is proud to have the privilege of giving Mr. Crane the place and the occasion for this important meeting.

Mr. Crane is a member of the American Society of Civil Engineers, Member and past President of the American Institute of Planners, Member of the American Society for Public Administration, and Member of the National Association of Housing Officials.

POST-WAR SUPPLY OF ARCHITECTS

Since the outbreak of war architects have been largely diverted into a variety of activities considered to be essential to the war effort. Many are now serving with the armed forces; others are employed in greatly expanded Government Departments; relatively few continue to be engaged in capacities at all reminiscent of their pre-war occupations; most assistants and students have been called up or have volunteered for service with the armed forces on reaching military age.

If order is to be created out of the confusion caused by the war, the future of the profession must be the result of careful planning, particularly in respect to demobilisation, recruitment and training. Moreover, these matters must be ordered in relation to the Government proposals for post-war reconstruction.

In February 1943 a White Paper on "Training for the Building Industry" was presented to Parliament by the Minister of Labour and National Service. This paper gave a figure of 1,250,000 as the maximum post-war strength of the building industry, a strength which it is understood is to be reached at the end of the fifth year after the war. From the recent White Paper on demobilisation, it may be assumed that this five-year period will commence when men and women are released from the forces to take up civilian employment. Discussions have taken place and Government departmental enquiries have been made to

determine the number of architects likely to be required when the building industry reaches this maximum strength. The R.I.B.A. has given evidence and has been represented at certain of the discussions. However, in 1944 the R.I.B.A. Council instructed the Demobilisation Committee to prepare an independent report upon which the Institute might base its policy on demobilisation and recruitment. This report was approved by the Council and submitted to the Ministries concerned.

In estimating the number of architects likely to be needed in the post-war period, the Demobilisation Committee decided that calculations must of necessity be based on the figure referred to in the White Paper and upon the proposals to reach that figure in five years. Careful consideration was given to all relevant factors, and in particular, to the conditions of professional employment which existed in pre-war years.

It was impossible not to take notice of an increasingly popular view that post-war reconstruction and building activities would involve a spectacular increase in the number of architects required, but after the most careful consideration of the many factors involved, it was found that when in due course the building industry reaches its maximum strength, the number of fully qualified architects for whom *full and regular* employment can be provided will be only slightly larger than existed before the war.

Apart from statistical considerations, great importance has been attached to the fact that in pre-war years many architects were under-employed, and that although a mechanical continuity of output is not practicable, a much fuller degree of employment will be necessary if architects and their assistants are to be adequately recompensed. Note has also been taken of the recommendations contained in recent official publications and reports that greater use should be made of the services of architects. Recruitment plans—which are under constant review—will allow for any increased employment which may arise from such recommendations.

It is also anticipated that Town Planning will require a number of architects whose activities will not be directly related to the output of the building industry, and that for a period after the war, the War Damage Commission will also need the services of architects in an administrative capacity.

Having determined the total numbers of architects needed during and after the five years' expansion period in the building industry, the Report indicates the manner in which the profession will have to be built up to the required strength. In this connection it is considered to be essential to the effective employment of the building industry that an appropriate number of architects should be engaged on advance planning at least twelve months before the corresponding ratio of building operatives becomes available.

The number of architects expected to be available in this country at the end of the war with Germany is considered sufficient to provide for the greatly-depleted building industry at that stage, but in view of the fact that demobilisation, recruitment and training of craftsmen will thereafter be arranged to ensure the rapid building up of the industry, immediate action will similarly be necessary to secure an increase in the number of architects available to meet growing needs. *This increase will only be achieved by the earliest possible release from the forces of all qualified architects, students and assistants.*

As far as may reasonably be estimated, the services of all qualified architects released from the forces could be fully absorbed during the first year after the commencement of demobilisation. Increases needed during the remaining years of the expansion period can be provided from three sources, the combined numbers from which are estimated to be approximately equal to the demand:—

1. Students whose full time studies have been interrupted by national service.
2. Assistants whose training was interrupted by national service.

3. Those who are at present, or may become, full-time students.

In the case of categories 1 and 2, their services as qualified architects will be needed during the second, third and fourth years, and because most will require two or three years in which to complete their studies, they must be released during the first year after the end of the war with Germany.

In the case of category 3, few would be able to complete their training before the end of the fourth year, by which time the supply from other sources would have become exhausted. For this reason, and in order that the profession may be maintained at a satisfactory level, the claims of national service must be carefully considered in relation to architectural education and training.

The R.I.B.A. considers that its policy of demobilisation and recruitment, as briefly described here, is essential to the successful carrying out of the Government's programme of housing and reconstruction as well as to the well-being of the architectural profession. It is continuing to press for the adoption of this policy by the Ministries concerned.

SPECIAL FINAL EXAMINATION

REVISED SYLLABUS

On 1 January 1946 a revised syllabus and time-table for the R.I.B.A. Special Final Examination will come into operation. Under the revised scheme the syllabus, time-table and question papers for the Special Final Examination will be identical with those for the Final Examination, with the exception of Subject F. (Thesis) in the Final Examination, which will not be included in the Special Final Examination.

The revisions do not affect the application stage of the Special Final Examination; that is to say, applicants for admission to the Special Final Examination will continue to be required to submit examples of their work accompanied by a detailed report or reports.

Applicants for admission to the Final Examination will continue to be required to gain approval for the usual Four Testimonies of Study.

Copies of the new form of application for admission to the Special Final Examination can be obtained from the R.I.B.A., 66 Portland Place, London, W.1.

MAINTENANCE SCHOLARSHIPS IN ARCHITECTURE

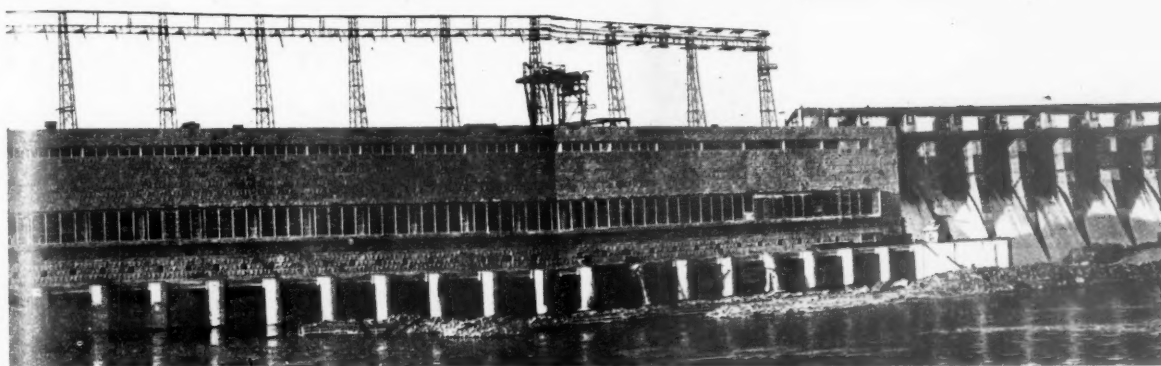
The Architects' Registration Council of the United Kingdom offer for award in June 1945 certain Maintenance Scholarships in Architecture. The Scholarships will consist of a grant for the payment, in whole or in part, of the School fees and necessary subscriptions, instruments, books, etc., and, when necessary, a maintenance allowance not to exceed as a rule £100 a year. The Scholarships will be renewable from year to year until the student has finished his or her School training. They will be available for Students of British nationality who could not otherwise afford such training to enable them to attend Architectural Schools approved by the Council. The Scholarships will be available both for students who have already begun their training and for students wishing to begin their training. Scholarships will not be granted to Students who will be less than 17 years of age on 1 October 1945.

Particulars and forms of application may be obtained from:—

The Secretary to the Board of Architectural Education,
Architects' Registration Council of the
United Kingdom,
68 Portland Place, London, W.1.

Copies of previous years' examination papers may be obtained on payment of 6d.

The closing date for the receipt of applications, duly completed, is 1 February 1945.



The Dnieper Dam (in collaboration with A. Vesnin, N. J. Colly, G. M. Orlov and S. G. Andreevski)

ACADEMICIAN VICTOR VESNIN

Victor Vesnin, President of the Academy of Architecture of the U.S.S.R. and architect of the famous Dnieper Dam, has been recommended by the Council of the R.I.B.A. to His Majesty the King as recipient of the Royal Gold Medal, 1945.

The Royal Gold Medal is annually conferred on a distinguished architect or man of Science or Letters, who has produced a work advancing the knowledge of architecture.

Victor Vesnin is one of the senior and most distinguished members of the profession in the Soviet Union. He was born at Yurev on the Volga in 1882 and graduated in the Civic Engineers' Institute in St. Petersburg in 1912. During the first World War he was the designer of a number of war factories. In 1930 he was appointed Chief Architect of the Dam and Power Station on the Dnieper and of the neighbouring city of Zaporozhye. Subsequently he was architect of several other hydro-electrical power stations on the Volga.

Early in the great period of Soviet reconstruction Victor Vesnin, in association with his brother Alexander, was appointed architect of many important buildings. Between 1923 and 1930

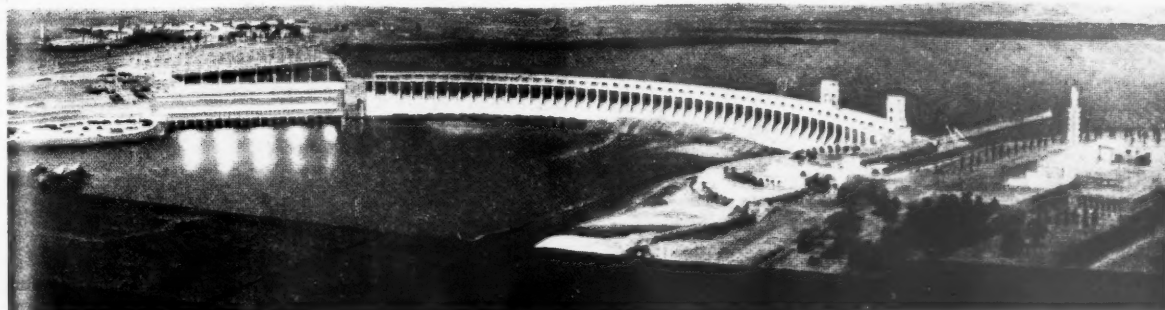
when he started the Dnieper Dam works, he built the Palace of Labour, Moscow (1923); the Arcos Building, Moscow (1924); a large store in Krasnaia Presnia, Moscow (1927); and one of the famous Caucasus Sanatoria at Natzesta (1927). He won first premiums in many competitions, including the one for the Kharkov Theatre, one of the largest theatre projects in the U.S.S.R.; the Palace of Culture for the Stalin Automobile Works, Moscow; the Government Centre, Kiev; the premises of the People's Commissariat of the Heavy Industry, Moscow, and the Second House of the People's Commissariat, Moscow. Work on this was in progress at the start of the war.

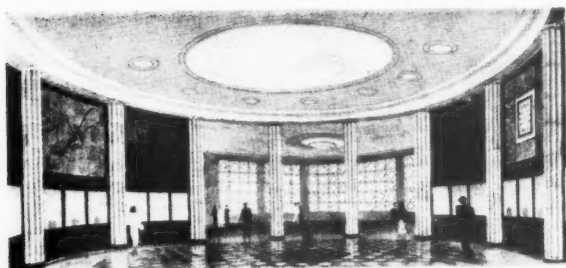
Victor Vesnin is also architect of the Voroski Cinema, Moscow (1930), of the Palace of Culture of the Proletarski District, Moscow, and of the Pavletskaja Metro Station.

When the Academy of Architecture was founded in 1939 Vesnin was elected an original member and the first president, an office he has held ever since. In 1943 he was elected a member of the Academy of Sciences of the U.S.S.R. Since 1937 he has been a Deputy elected to the Supreme Soviet.

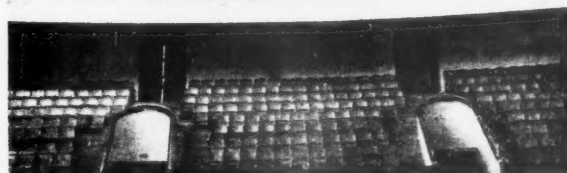
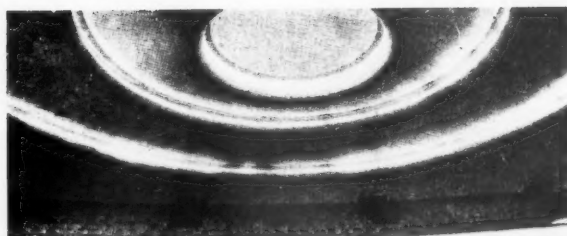
Above: The Power Station

Below: A General View of the Model showing the whole scheme

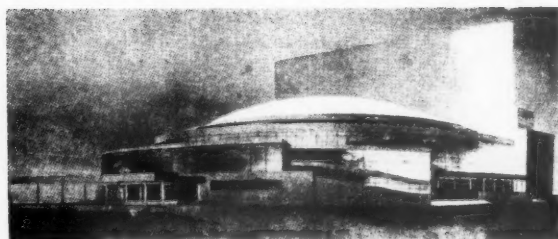




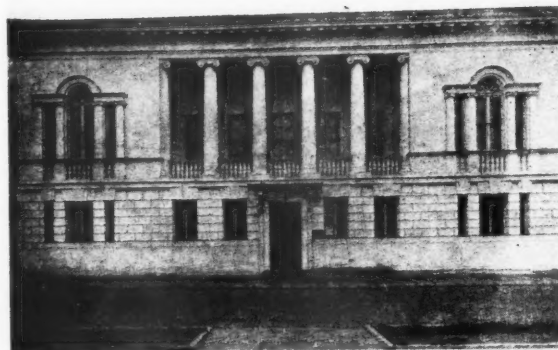
To right: Restoration of the Sirotkin House as the Regional Museum, Gorki. (1913)



To right: Palace of Culture of the Proletarski district, Moscow. The Main Entrance



To left: Paveletskaia Metro Station, Moscow. (1939)



To Left: Assembly Hall in the Palace of Culture of the Proletar ki district, Moscow. (1931-3)



To left: Winning competition design for the National Ukrainian Theatre, Kharkov. (1929)

NATIONAL PLANNING

THE WORK OF THE R.I.B.A. CENTRAL ADVISORY COMMITTEE DESCRIBED
IN A PAPER BY

A. W. KENYON [F.].

Chairman of the Central Advisory Committee.

Read at an Informal General Meeting on Tuesday, 14 November, by Henry Braddock [A.],
Hon. Secretary of the Committee.

The President in the Chair.

I have been entrusted this evening with reading a Paper on National Planning and I am honoured that it should fall upon me to be the mouthpiece of that Committee appointed by the Royal Institute of British Architects to give consideration to this subject.

I am quite sure everyone will agree that it is logical to view the many complex problems which arise in different parts of the country in such a manner as to appreciate their true significance as part of a whole.

To plan is not to lay down hard and fast rules of what shall be done so much as to sort out the essential factors and put these down in a graphical form so that they can be seen together. Unless this is done we shall continue to find ourselves resorting to insular planning without paying due regard to the influence one area exerts on another. It is in this sense that we should think of National Planning. It is a general view of the whole, into which can be moulded the more intricate details.

I have sometimes likened National Planning to a jigsaw puzzle which cannot have its parts designed separately in the hope of making a picture, but must have the picture made first so that the parts will fall into their allotted places. The work of the Central Advisory Committee is the broad outline which gives the composition, before the details are filled in.

It is this broad outline I want to present to you to-night.

As a nation it has not been our habit to plan until we have a crisis, but when that crisis arises there is no nation more capable than we are of planning and planning to the last degree.

The war has again made us conscious of the unplanned state of our country, but it did exist and was getting extremely serious before the War. To take only one instance—our road problem with its accompanying death toll. This was due to a new factor which came upon us suddenly—the internal combustion engine. We tried to cater for it by adjusting bits of our roads here and there, but without considering the problem as a whole although it was a national matter. Does this and many other vital matters constitute a crisis for which we must plan?

To plan is to arrange things in an orderly manner so that we obtain the best from our efforts in comfort, convenience, health, happiness and efficiency.

Planning is not something that must be imposed upon people but it is a means of assisting life to be carried on in reasonable comfort and with efficiency. Those who resist planning because they misunderstand its true purpose and place are barring the way to the improvement of national living and national efficiency.

Those who think that planning means regimentation of buildings and of lives are unaware of that freedom, charm and beauty that can be achieved by thought and care by those who wish to arrange things with sympathetic understanding.

In suggesting the building of National Highways our minds may well turn to those great motor tracks of an enemy country, brutal, ruthless, barren, endless and nerve racking. They are a true example of regimentation in planning where kindness for the countryside and thought for the person is ignored.

They are like progress charts, which are frequently inflicted upon us having one column omitted. That column should be headed: "Human nature."

Let us keep that column of "human nature" constantly before us so that when we plan for the nation we keep the human factor always in the forefront.

Before I describe what we have done in greater detail, let me explain briefly the organisation which has been at work.

The Royal Institute of British Architects has a unique organisation. The country is divided into eighteen divisions with an Allied Society in each division presided over by a President and Council. Each of these societies was called in to work on their particular area under the direction of a Central Advisory Committee.

This Committee drew up certain suggestions to be followed, and the Societies set to work on those recommendations, amplifying them with the intimate knowledge which they possess of their locality.

From time to time they met the central body for discussion of their particular problems and in this way it was possible to link one society's work with another and thus avoiding the limitations imposed by artificial boundaries. When the work was completed by each area, it was plotted on to the larger and more comprehensive maps by the Central Office staff, and discussions again took place to see that any adjustments which had been made were satisfactory.

In this way architects throughout the country were engaged as a team, working voluntarily and supplying that local knowledge they possess to a remarkable degree, which is so essential to the success of such a project.

As well as this work of the Allied Societies the Central Committee have consulted various authorities on the special features of the plan. I am going to enumerate these because I should like to thank them publicly for the assistance they have given:—

- The Ministry of Town and Country Planning.
- The Ministry of Fuel and Power.
- The Ministry of War Transport.
- The National Gas Council.
- The British Gas Federation.
- The British Electrical Development Association.
- The Central Electricity Board.
- Mr. Ashton Davies (Past Vice-Chairman, London, Midland and Scottish Railway).
- The National Trust.
- The Commons, Open Spaces and Footpaths Preservation Society.
- The Standing Committee on National Parks.
- The Nature Reserve Investigation Committee, and
- The British Water Works Association.

The information gained from those sources has enabled the Committee to keep a balanced view of the various interests concerned.

I should like now to explain, briefly, some of the special considerations which have been given in the preparation of this plan.

PART I. DISTRIBUTION OF POPULATION AND INDUSTRY

Mr. President, one of the most significant changes in the life of English people is their growing dependence upon organised social services such as educational, medical and recreational, and on utility services such as water, drainage, gas, electricity and telephones. So great has been the desire to obtain the benefits of these that our population has in the past largely settled itself in close proximity to their sources.

The original need of the utility industries to locate their plant in the closest proximity to the user has been a strong influence towards the further concentration of population.

The efficient and economic provision of social and utility services is in exact relationship to the distance they are conveyed from their source to the consumer.

In considering this question two further matters must be taken into account which have been the subject of common discussion in recent years. The first is concerned with a need for a measure of decentralisation of industry and population from large urbanised areas of the country such as London, Manchester and Birmingham. The purpose in this is to eliminate excessive overcrowding, including congested and uneconomic transport. This decentralisation enables greater freedom for reconstruction, unhampered by the pressing need for maintaining maximum living accommodation.

The second is concerned with providing a standard of living in agricultural and mining areas where the population is scattered and unable under present conditions to be provided economically with necessary services. Any proposals envisaging a standard of housing appropriate to the needs of the agricultural worker and equivalent to that of the town dweller must incorporate an economic solution of the distribution problem.

There is, therefore, a need for striking a balance between two opposing requirements, the disposition of population for the special needs of industry or agriculture and the disposition of population in order to convey public services economically and to maintain a current standard of living.

The oldest industry in this country, agriculture, together with its allied industries, requires the services of a farming population dispersed over the land. This has resulted in the agricultural worker being deprived of living facilities which have become a commonplace to his brother in the town. This fact, together with others, has created a distressing migration from the country to the town.

There can be no doubt that any post-war national policy that may be evolved must envisage the maintenance of a prosperous and productive agricultural industry as a major national need.

The re-population of this industry in its new mechanised and highly productive state emphasises the need for providing housing conditions and services for the operatives which may be equivalent to those obtained by the town dweller.

The introduction of mechanisation on a large scale will be reflected in two ways. The skilled agricultural worker will no doubt have a greater degree of education and consequent desire for a fuller life, and his relationship with the town dweller will be much closer.

Similar problems arise in industries dealing with extraction of raw material from the earth such as mining and quarrying. The degree of dispersal in these cases is perhaps less than that necessary to agriculture and is confined to limited areas. The supply of electrical and other forms of power and the improved policy of pit-head siting will assist materially in providing for the well-being of their operatives.

If what I have said is a fair statement of the problem so far as it affects agriculture, the solution must be sought, as I have already stated, in striking a balance between the disposition of its workers and their families and conditions necessary to the economic distribution of services.

The need to review the position of the industries which require highly concentrated populations and the problem of providing these populations with a current standard of living does not

seem so apparent. It may be said that industries of this nature are satisfactorily placed relative to the source of power, transport, raw and part-finished materials to markets and to the unlimited supply of labour. It may also be said that the operatives are equally well placed. Their proximity to the social services should be all that could be desired.

The facts, however, do not fulfil the promise. Although industries and operatives may be properly related, the conditions in which they exist are, on an average, below a reasonable standard. The reason for such conditions must be sought by reviewing the past.

During the last 100 years the ever-rising demand of a rapidly increasing population for housing, workshop and service accommodation has been irresistible. The means of supplying this demand has been stretched to the limit and often by a policy of improvisation. Buildings which have outlasted their original purposes have been pressed into service by adapting them for new purposes and for new conditions.

During the last 30 years the effort to keep pace has been interrupted by two major wars. The need to retain existing and outworn buildings has resulted in the perpetuation of our slums. It should, however, be remembered that areas in our towns and cities which have been labelled "slum" are no basis upon which any estimate of conditions can be made.

A slum is an area which has been condemned as totally unfit for human habitation and beyond redemption. The label takes no account of other and far more extensive areas, which if compared with the present conception of a minimum standard of living and workshop accommodation could not hope to survive the test.

It is no longer possible to consider that replacement of outworn buildings is a simple matter of demolition and rebuilding.

In order to create the necessary space within which a process of continuous reconstruction can become operative, populations must be moved and resettled. To preserve the essential relationship between industry and the operative, movement of the latter must be considered with that of the former.

The idea of decentralisation is not new. A reduction of the population of our outgrown cities has been considered essential to the improvement of living conditions. To remove large sections of population from such areas presupposes that we shall have prepared for their reception elsewhere. This problem can have no solution within the arbitrary boundaries of local planning areas, and here we find a strong justification for the preparation of a National Plan.

To determine the location of reception areas a study must be made on broad lines of the influences which have dictated the position of industry in the past.

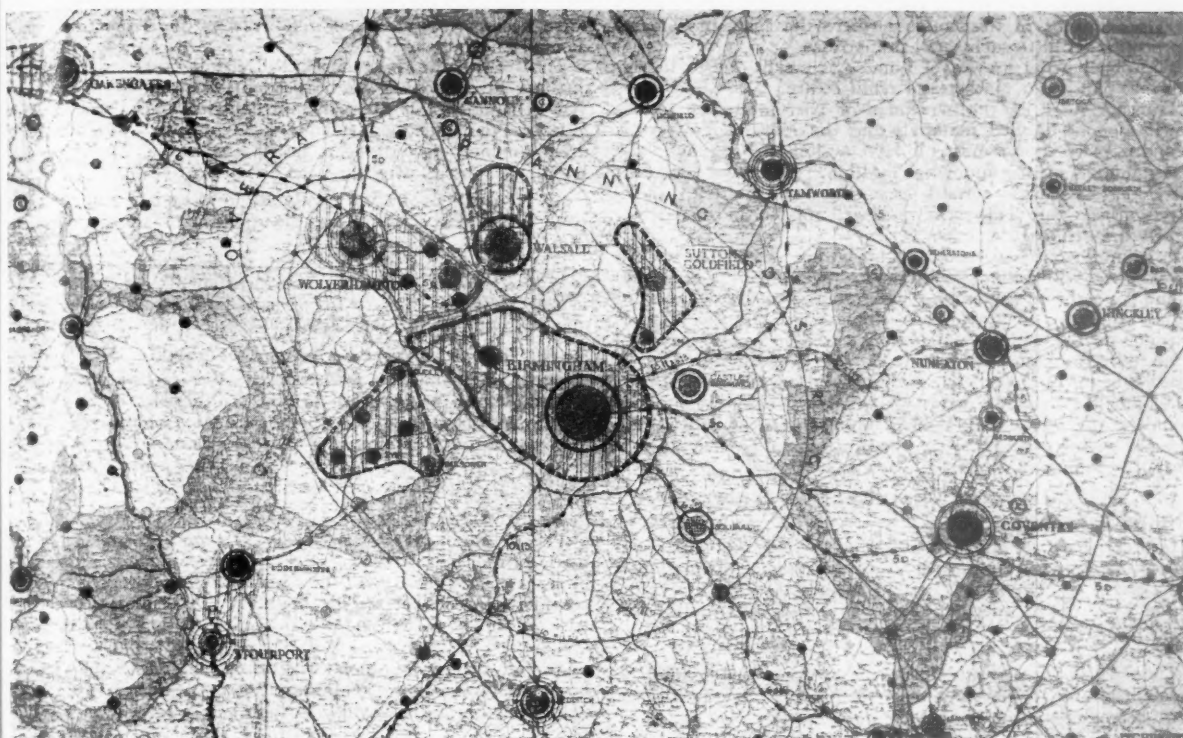
These influences may be considered under the following headings:—

- (1) Source of raw material.
- (2) Source of power—such as coal.
- (3) Transport, including ports.
- (4) Water and climatic condition.
- (5) Source of part-finished materials.
- (6) Markets.
- (7) Labour.

It is probably true to say that with the possible exception of the source of raw material, the source of power has been the determining factor in deciding the general location of industry.

The production and conveyance of electrical power and the development of its use has placed a very different aspect upon the part that power will play in the locating of industry in the future. The conversion of coal into electricity immediately loosened the tie by which many industries were bound. Within certain limits, therefore, industry may be moved so far as power is concerned. Source of raw material will naturally limit the location of converter industries and those handling heavy manufactures.

There are few industries which are still dependent upon water or climatic conditions.



BIRMINGHAM AREA

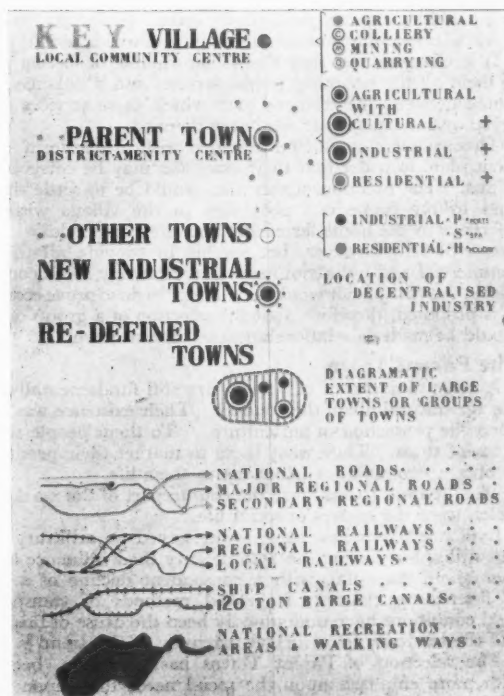
The above is one of the nine sections of the 1 in. to a mile maps illustrating detailed proposals.

The reader will appreciate that a black and white reproduction loses the advantage of the colour used on these maps to emphasise each point.

The photograph does, however, clearly indicate the following:

- (1) The selection of villages for development to enable economic distribution of services.
- (2) The grouping of agricultural and mining villages about a "Parent Town" for social and amenity purposes.
- (3) Proposals for the amalgamation or grouping of inhabited places under one planning authority (see Stourport and Kidderminster, Wellington and Oakengates).
- (4) The need for the recognition of "Overall Planning Districts" wherein the planning needs of the whole, subject to national interests, will determine or guide the planning of its parts (see Birmingham and its surrounding towns and developments).
- (5) Indication of new industrial areas (see Stourport, Redditch, Tamworth and Itchington, based upon their relationship to developed transport facilities).

Reference is not made above to transport or to open space, as the proposals made on these subjects can only be fully appreciated if viewed as a whole. The national roads, particularly, form an important part of the plan in this area and should be followed upon the diagrams on another page.



The location of home markets relative to manufacture has little significance in this country where the space-time factor has been reduced to such small proportions.

The phenomenal growth of London is partly due to its significance as a great market and retail centre.

Transport used for the movement of part-finished materials, distribution of finished materials and the movement of goods to and from our ports, must still have a vital part to play in the determination of new industrial location. It seemed probable, therefore, that with certain exceptions necessitating careful selection transport is the most fundamental factor in the location of new industrial settlements.

A balanced national policy aiming at reconstruction and redevelopment with an improved standard of living must, therefore, admit the right to recommend limitations upon the location of industry in order to provide convenient and healthy conditions in which intelligent and contented industrial operatives may live.

No industrial planner would be likely to direct industry into a location or into circumstances which would impede its successful development; indeed, under a national policy the opposite would be the case. Here then is our problem, to balance the needs of industry and agriculture with that of good living and social environment.

PART II. THE AGRICULTURAL PATTERN

Village Communities

In order to provide proper services on an economic basis there is a minimum limit to the degree of dispersal of population if good social conditions are to be guaranteed. To satisfy this demand, we have selected villages where location and past development show them as convenient centres for local community life.

These villages are considered to be the ones which shall be deemed suitable for development and in which the provision of new accommodation might be centred.

Selection has been made on the following considerations :—

- (a) Convenient spacing relative to local activity.
- (b) Convenient access to and possible future provision of public services, particularly water.
- (c) Relationship to and communication with parent towns.

It is essential that they should be capable of having supplied to them all the necessary public services and a balance must be struck between the distance over which these services are conveyed and the economic minimum demand.

These villages should be provided with a long-term development plan, in order that their extension may be correctly determined. The function of this plan would be to settle the use of land in the immediate proximity to the village with special reference to the home farmstead and the home fields.

It will not, however, be possible to provide all the social, commercial and industrial needs of a relatively small community within the village, nor would an attempt to do so prove economical. It is proposed, therefore, that the selection of a group of villages should be made in relationship to a "parent town."

The Parent Town

A large majority of our towns are still fundamentally part of the agricultural life of the country. Their existence was founded upon the protection of agriculture. To them people retired in times of stress. They went there to market their products and to obtain commodities necessary to their life.

The "parent towns" are the counterpart of the market towns which were the centres of social life.

Evidence shows that these towns served an arbitrary limit of four miles, but during the 19th century their influence extended over about six miles, with a consequent decline of a number of flourishing centres. Improved methods of transport and road conditions have undoubtedly been the cause of this change, and the tendency for a further extension of this trend is evident.

The selection of Parent Towns has, therefore, been made with more emphasis upon the social needs than upon those of marketing.

It is recognised that a town of sufficient population to support these necessary services will require some corresponding commercial and industrial life.

The "agricultural planner" will require to consider which of these parent towns will be needed for marketing purposes. The remainder will need the introduction of an industry or industries to enable them to maintain their status and to perform their function towards the satellite villages. The basis of selection of these towns has been as follows :—

- (a) Convenient spacing relative to local agricultural or other industrial activity and the grouping of the surrounding villages.
- (b) Convenient centre from which public utility administration and social services may be distributed.
- (c) Close proximity to major road facilities and railways.
- (d) Suitability for extension.

Parent Towns with Cultural and Ecclesiastical Emphasis

There are particular towns which have special prominence resulting from the existence of great cultural institutions, such as Canterbury, York, Peterborough and Cambridge. Their importance has varied since their foundation, but they still remain clearly defined and in particular they still perform their part in the general life of the surrounding country.

Parent Towns with Industrial Emphasis

The development of industry has given new importance to many of our older towns. Their original function as a centre of rural life has fused with their industrial life. Such a town is considered as one where the population is primarily occupied with its industries, but has still a definite relationship with rural life.

The relationship between these "Parent Towns" and villages is of vital importance. The recognition of their essential function will add point and certainty to local planning proposals.

PART III. THE INDUSTRIAL PATTERN

The beginning of the industrial era and its dependence upon the supply of coal as its source of power saw the start of a rapid readjustment of population settlement, intensified by a great increase of total population.

The source of power and raw materials resulted in the creation of such towns as Birmingham, Manchester, Sheffield and Leeds.

New industries free to locate themselves without economic reference to the source of raw material have in more recent years taken advantage of their freedom and have spread themselves at will and without direction. It is in such cases that guidance by the planner will be required if we are to prevent this country from further despoliation and misuse of land. The controls exercised by geographical conditions have lost their significance. We must fill the gap.

Large areas of country, in most cases immediately adjacent to our industrial cities, have become subjected to an ill-defined urbanism. The resulting pattern is neither town nor country. The conditions under which the inhabitants live do not give any opportunity for community life.

It is suggested that if there is a specific demand for this form of development it must be provided within defined limits and must be equipped with the appropriate social and utility requirements.

On the wider sphere of the National Plan there are broad areas requiring special treatment, in order to maintain barriers of open space between the defined limits of cities and towns so as to preserve healthy living conditions.

Dormitory and Domestic Towns

The development of the industrial pattern as a separate structure and its fusion at some points with the agricultural pattern has caused one other special condition.

Increase of prosperity has created a large section of population with a new economic freedom. With more convenient means of transport people began to assert themselves by moving away

from the less desirable location of their business to the quiet and healthy countryside.

Depending upon their salary level and the ease with which they were able to detach themselves from their occupation, they moved either to a defined township or to the more accessible environment of a newly developing suburb.

Beyond the present extent of this sprawl round London and other large centres there lie towns which owe their increased development to the movement of people capable of wider detachment from business and commercial life. These towns have become primarily domestic.

In a few cases towns of this nature are favourably situated to be recognised as one of a group fulfilling the purpose of a complete social structure.

In other cases they may need special consideration in respect of their industries so as to assure a balance of occupation.

Recreational Towns

Towns with special attractions and facilities for recreational purposes have been considered for their special characteristics. They fall into four groups:—

- (a) Coastal holiday resorts catering for a high degree of amenity.
- (b) Coastal holiday resorts such as small towns and villages less accessible and relying on their natural and informal development.
- (c) Towns which have spa facilities.
- (d) Towns with special historical features.

The peculiar setting of many of our sea-coast towns, restricted on one side by the sea, often by hill barriers on their landward side, have tended to spread parallel with the coast causing what might be termed coastal ribbon development, thus linking up the townships and forming a considerable mileage of coast almost totally built up.

It is of utmost importance to the National interest that in providing extended facilities for holiday accommodation we should make every effort to preserve the natural environment of our coast. Positions have been considered for sea-coast towns capable of providing additional accommodation to which development should be mainly restricted.

Towns with special medicinal spa facilities which we possess in this country require more consideration than they have had hitherto. In the National interest it is necessary that these facilities are made as attractive as possible to our own as well as to foreign visitors and equipped with first-class hotel and recreational facilities.

This also applies to our towns of historical interest which have no rivals in any part of the world.

In foreseeing the need for additional holiday accommodation, suggestions have been made for their location with careful consideration of their relationship with transport.

Disposition of Recreational Open Space

It is important to define the meaning of open space considered on a National Scale. The idea of National Parks as applied in America is not applicable to this country. The complete setting aside of large areas in which the native plant and animal life is preserved is only possible in a country where space is still of little concern. The comparatively close relationship between town and country as it is in this island makes it impossible to sterilise large areas of land for this purpose.

The term "recreational open space" has a rather special application when used in a National sense. Locally it implies public parks, playing fields, local commons, and so on. Nationally it refers to large areas of country through which special facilities will be provided and maintained to enable reasonably free movement by those seeking the country.

Areas chosen for this purpose are already famous for their beauty, and in some cases suitable for their sports. It is considered to be of vital importance that wherever these areas have a defined local life and tradition, these should be preserved and



care taken not to interfere with their continued prosperity and development. It is in these things we are able to appreciate the real England. An important feature of our proposals is the linking up of these areas. These links would be comparatively narrow strips of land affording interesting routes across the country. Advantage has been taken of many ancient tracks which are part of our historical background. Special attention has been given to our coasts as a continuation of these recreational open spaces.

PART IV. TRANSPORT

Transport divides itself into two major parts.

- (a) Movement of goods and transport by public conveyances, and
- (b) Privately owned vehicles.

The former move largely under control on prearranged routes as far as long distances are concerned, and the latter, although using the most advantageous routes for long distances also use almost every road which is suitable to their purpose.

Public and commercial transport is of three main types, using road, rail and canal. Private transport is confined almost exclusively to the road.

It will be seen, therefore, that the road must cater for transport with two distinct purposes, one requiring a limited freedom and the other a total freedom of movement.

The railways and canals are limited to tracks which require the provision of special equipment and conditions and the services of a large maintenance and operating staff, and are suitable for controlled and limited movement.



Before the perfection of the road vehicle the railways held a monopoly as a transport service. The development of powerful and swift road vehicles brought with it a new freedom of movement and a door-to-door service which at once became a vital competitor. The introduction of the motor coach making long trips at cheap rates and the use of cars by private owners brought further competition with the railways.

It would, therefore, seem obvious that public and commercial transport must be considered as a whole and that the services performed by each should be the best suited to their peculiarities.

The complicated pattern of our roads which have grown up on the needs of local service makes it impossible to adjust them to the needs of long-distance travel without completely destroying the equally important local use. Any attempt to improve existing roads to a standard comparable to the modern motor vehicle would also cause immense damage to existing centres of population large and small.

National Roads

The National road system as suggested is entirely new and is sited in the most part upon land not used before for roads. They are intended to link distinct areas of the country rather than places, and they afford admirable accessibility between each of the major industrial areas and the principal ports. At practically no point do they cut through an inhabited place, and in most instances no direct contact is made with towns or villages.

The length of these National Roads has been reduced to a minimum, at the same time giving adequate and vital service. The approximate length is 2,120 miles.

It will be seen from the maps that these roads are radial

from London with cross routes introduced linking up the country from East to West and can best be understood by a reference to the maps.

The National Roads are intended to be fully protected and in this way will assume the advantages now only enjoyed by the railway. In order to maintain high speeds and economic and safe running there must be a minimum of interruption. There is no intention to avoid bends or hills as these are an advantage when properly handled and avoid the monotony of straight and level tracks.

Entry into them would be at planned points arranged conveniently to populated areas in the form of flyover roundabouts, ramps and pick-up lanes. All roads which do not make contact at these points will be flown over or taken under. It is not considered that any exceptional width will be required, nor will there need to be a segregation between fast commercial and fast private traffic. They will require, however, a minimum of two uni-directional tracks, with wide spaces and head-light shields between. Provided there is no appreciable cause of interruption to a steady flow there should be no congestion.

Regional Roads

The remaining system of roads is based upon existing siting and these have been divided into three categories: Major Regional, second-class regional and local. These categories are based solely upon the degree to which they allow of movement at an agreed speed.

Roads scheduled as "Major Regional" will require adjustment of width and safe entry. The by-passing of towns and villages will be necessary.

The Second-class regional roads will resemble our existing A.I. roads. In these cases there seems no reason to divert them from passing through inhabited places but a variation of maximum speed will be necessary through built-up areas.

The Local roads are the remaining roads of the country and will be used for local communication at reasonable speeds.

Railways: The National Routes

It is recognised that the railway system as it now exists must be the basis of any proposals which have to be made.

The radial routes from London are based upon the recommendations of the London Regional Reconstruction Committee.

To facilitate the use of these radial routes by all areas of the country, adjustments have been suggested to other existing installations to enable a series of cross routes to operate fast trains. There may not be any records showing the necessity for these services but this is probably because they do not now exist. Evidence has, however, been brought forward to show how important these cross routes are and how they would also avoid much traffic which now passes through London and other centres because of the better services afforded on the existing radial routes.

The cross routes have been arranged so that at points of intersection with the radial routes interchange will be possible. These interchange stations are divided into two groups, the more important allowing for stoppage of trains on main radial routes to occur at approximately 100-mile intervals, the remainder being used for less important local services.

Regional Railways

In addition to cross routes, a series of other routes have been arranged giving adequate connections between principal industrial areas and the ports.

Certain recommendations have been made regarding the less important railways. Sections of these have been considered redundant. Their removal is suggested and the tracks used where convenient for roads.

Suggestions have been made to change the motive power of certain lines in areas where the population is dispersed, but where a useful service should be provided with frequent stops at villages but only requiring small passenger accommodation.

At present such services are reduced to about two trains a day and perhaps none on Sundays. It is suggested that they should be operated by diesel motor traction on the rail-bus principle and should be more frequent.

Wherever a similar need for frequent service occurs but requiring large passenger accommodation as happens in suburban areas of large towns, electrification has been proposed as a major policy. In these cases the heavy capital cost of equipment is deemed to be justified.

It is further suggested that there is room for a complete overhaul of our system of mineral railways. On examination there seem to be wasteful and confused conditions which might well be cleared up, and which would benefit our worst industrial areas.

Canals

It is considered that the canal is still capable of playing an important part in our transport system. Attention has been confined to the four main canal routes and in each case they have been considered as extensions of port facilities into the interior of the country.

The four referred to are:—

- (a) The Grand Union from the London Docks to Itchington, being on the south-east of the Birmingham plateau.
- (b) The Severn canal from Bristol to Stourport, on the south-west side of the Birmingham plateau.
- (c) The Trent canal from Hull to Tamworth, west of Birmingham.
- (d) The western part of the Trent-Mersey canal.

It is proposed that these four canals should be made capable of being used by a standard barge of 120 tons in groups of three. Locks, embankments, bridges and dock facilities should be raised to a high level of efficiency. The remainder of the canals ought to be carefully considered on a regional basis.

CONCLUSION

In conclusion I wish to make it clear that the graphic plan as conceived by the organisation set up by this Institute is a first sketch, the first step in a process of development. It enables us to view the many problems which go to make up the life of the country in a broad and simple manner, without being too much concerned by details. It is a conception of the relationship between the various aspects of our national development set down in a graphic form so that all can visualise in one picture the dependence of one condition with another.

No attempt has been made to enter upon detailed planning of towns. This is a much more intimate matter. A National plan will, however, give a guide to all cities, towns and villages in showing their position relative to the whole, and will give them a new sense of security and certainty in resolving the local problems that lay before them.

In order to illustrate how this guide would operate, a large-scale diagram of Manchester and Liverpool has been prepared by the two Allied Societies in this district. These maps show how two large centres can co-operate when they have a framework in which to work.

It is upon these lines that all communities large and small could consider their development plans and so avoid uncertainties that are bound to arise unless some general guidance is given.

Mr. President, in presenting this work to the Institute my Committee have made proposals with regard to the next stage in its development. We are aware that this work is but a small, however necessary, step towards establishing some basis upon which this country can progress towards a new environment. With this "first sketch" as a background we can now consult with all organised bodies who represent those with special interests, and with those whose business it is to interpret the wishes of the nation into operable law.

It will be a task requiring great patience and great energy, particularly upon the part of the architect. I venture to suggest, however, that the end in view is well worth the effort and, with goodwill and appreciation of the crisis that we face, can be achieved without one iota of compulsion, dictation or regimentation.

I believe that, dealt with in a manner which is essentially British, we shall find in its fulfilment a new era of freedom and scope for individual initiative.

And now, Mr. President, with your permission I wish for a moment to speak for myself.

We are all disappointed that Mr. Kenyon is unable to be with us to-night, and in his absence I wish to pay a tribute to the way in which he has guided the Central Advisory Committee through its work. It has been a fine example of energy and good chairmanship.

As one who has had charge of the work under the Committee I would like to thank them for their kindness, forbearance and support. I would also like to thank those who have worked so hard and with so much understanding in the production of the maps which you will see in the foyer. I would like also to mention specially Mrs. Barrett, who has worked on the Manchester and Liverpool plans and latterly on the whole scheme in London, and Mr. Stephens, who has been second to none in his devotion to the work.

In reading this paper I have felt a great sense of responsibility. I have been conscious that I am speaking to a body whose informed opinion can be one of the greatest influences for good to the future of this country. I hope, therefore, that I have been able to do proper justice to my task.

DISCUSSION

The Rt. Hon. Viscount Samuel: I had not understood that it was on this occasion that I was to be asked to propose a vote of thanks to Mr. Kenyon and Mr. Braddock, and I fear that I rise without preparation for so doing. However, in response to your call I gladly move that this meeting presents its thanks to Mr. Kenyon for the Paper that has been read, and to Mr. Braddock for having read it and for his own concluding observations.

Your great profession, which is such a fine constructive profession, is now turning to what the previous generation would have regarded as a new task. Previously the building was considered to be more or less self-contained, and the architect's business was to construct a building suitable for its purpose and worthy from the point of view of both construction and art. Now you are turning your attention also to the environment of the building. You recognise that your work has not only an immediate and a particular purpose, but also a social purpose. You realise that the buildings which you erect take their place in the town and that the town also influences the character of the individual building. You are recognising in these days, as every thoughtful person must recognise, that the environment has a deep effect upon the character of a nation, for qualities were fostered in ancient Athens or in medieval Florence which do not find any very suitable soil in modern Bermondsey or Leeds.

Now that we have had so many of our towns partly destroyed, an opportunity does arise for this country to present to the next generation a more suitable environment for a great and civilised people. While in those blitzed towns the problem of reconstruction is urgent, the movement for better planning which is stimulated by the present opportunity has also spread to other towns, including, for example, the town of Oxford, in which I have been living for the last four years, which is now all agog with all kinds of new proposals for its own improvement to make it more worthy of its great traditions and heritage. Therefore, as the physicist has to consider not only a force, but its field, so the architect has to consider not only the individual house or factory or whatever it may be, but also the town in which it is situated. Hence your great undertaking of the National Plan which is exhibited in another part of this building, and which has been the subject of the deeply interesting address to which we have listened to-day.

There were two observations made at the outset in Mr. Braddock's Paper which interested me very much. One was the suggestion that in constructing main motor roads you should "be kind to the landscape." That is an admirable phrase. Instead of having something brutal and rough thrusting through regardless of both history and beauty, you should be kind to the landscape. The other observation was that human nature must be the basis of all your work and that regard for the human personality must be the foundation. That is also very true.

I would carry that one step further and say that when you are considering human nature and mankind in general, you must consider the family as an institution. Sociologists, in discussing the social relations, have for a long time written and thought as though there were two factors, namely, the individual and the State. You will find that most of the books on politics and on other branches of sociology deal with those two factors, but there are really three. There is the individual, there is the family and there is the State. It is of vital importance that our civilisation should cater for the family and foster and encourage it. One of the greatest evils of our time is the dissolution of the family bond due to economic and various other circumstances, to the comparative looseness of the marriage tie, to the small number of children, and generally to the different attitude in this generation towards the family as such, compared with the attitude in previous generations.

I make these observations because the matter very closely affects your own work as architects and the whole of this problem of replanning.

We hear a great deal of the controversy between the flat and the house. Undoubtedly ordinary men and women want a home which is a family home and one, if possible, with some space around it. They want room to live. We are told that you have to make your choice between having a family home in a proper environment at a considerable distance from your work with a great deal of travelling to and fro, and having on the other hand, a flat near the centre of the town in close proximity to your work. That is the alternative that is offered. The observation that I wish to make to you, and which I would leave with you as my contribution to this afternoon's discussion, is that the whole of that problem turns upon a factor about which far too little has been heard in the whole of this planning movement, namely, the question of urban transport. That is the key to it all. Why should you say that the people have got to be given an alternative between having crowded and more or less congested flats towards the centre of the town, and

having, on the other hand, three-quarters of an hour's travel each way under circumstances of great discomfort in crowded buses or tubes, hanging on to straps or struggling for seats? Why should that be the alternative? Why not improve your system of urban transport? The extension of London would have been impossible without the tube railways, but our tube railways may be only in their infancy. It is assumed that the uncomfortable and inadequate conditions of the tube railways are necessary for all time, and that the inadequate motor bus services in our provincial cities have to be endured, and that therefore, rather than face those conditions, the people are to be content to live in flats.

The flat is not a suitable environment for the family. In considering the interests of the children and the home you should try to get away from planning your towns so as to have these great dwellings in the centre. I remember that when I was a young man these huge flats first began to be built for the working people, and they were called "Model Dwellings." They were enormous barracks, and people had to walk up four or five flights of stone steps to their tiny rooms, which could never be a really suitable environment for a family. I cannot imagine any person writing his autobiography and referring to his childhood and saying: "How well I remember my youth. What nostalgia I feel for the fifth floor of Peabody Buildings in Clerkenwell!"

My suggestion, therefore, is that you should concentrate far more attention in this Plan, and in all your work upon the problem whether the tubes should not be doubled and trebled in number and frequency of trains, and in addition, whether you could not have swift motor roads for the motor omnibuses running express services from one end to the other at high speed on safe roads, and not put this alternative before the workman: live within ten minutes or a quarter of an hour of your work in a huge block of flats or alternatively, travel for three-quarters of an hour to some outlying suburb where you can get health and comfort, a family house and a garden. That should not be the position at all. Your problem should be how to enable him to get those conditions within a quarter of an hour of his centre and of his work.

It is not a question of distance, but it is a question of time. With tube railways and the internal combustion engine the mileage is of no importance. It is a question whether you can go for a distance of three, four or five miles in a quarter of an hour, as you should be able to do, and have the same advantages of proximity to your work and to the communal centres of the towns as you have now within a quarter of an hour's walk or a quarter of an hour's bus ride.

I remember that in one of H. G. Wells' early books—I think that its title was *Anticipations*—when motors were first coming in, he forecast the building of great numbers of swift motor roads covering long distances, and he suggested that London before very long would stretch from Harwich to Portsmouth. He suggested that that would all be London, and he said that people were always willing to travel for an hour between their home and their work. When they had to go on foot, the limit of the towns was three miles. When they were in a horse omnibus it would be between five and six miles. When they got on a railway the limit would be much longer, and when you had a door-to-door motor service it might be even farther than on the main line of a railway. Conditions, therefore, are limited by transport.

I have detained you long enough. I should have liked to have said something about the present condition of planning legislation and what you may hope for in the immediate future from the Government and Parliament, for this afternoon in the House of Lords we have just passed the Third Reading of the Town and Country Planning Bill. It is all very well so far as it goes, but it goes a very little way. It is large in bulk, but small in content relatively to the needs for planning legislation in our time. We want something much more drastic and much more effective in order to make possible the execution in practice of the Plan which has been laid more or less in theory before you this afternoon. The Government, however—which I must say has been exceedingly dilatory in these last four years—do hold out prospects that after this preliminary Bill which has now been passed into law and which will do some good, especially in the blitzed areas, there will be legislation, probably next year, for dealing with compensation and possibly for dealing with the distribution of industry. When that is done you may go ahead full of zeal and energy in order to carry out these great projects which are before us. If they are carried out, our generation and the next generation may have a feeling of pride and satisfaction that they will give to the people of England of the future the prospect of an environment far nobler and far more civilised than that which we have inherited from the past.

Mr. J. L. Denman [F.], in seconding the vote of thanks which Lord Samuel has so ably proposed: I would like to state that in my opinion the profession, and I would add the whole country, is under a debt of gratitude to our dynamic Chairman, Mr. Kenyon, and to his assiduous deputy, Mr. Braddock.

Mr. Kenyon has told me of his great disappointment, in which we all share, that another important mission prevents his presence with us this evening. We do, however, congratulate and thank him in his absence for his lucid exposition of the National Plan. Our appreciation and thanks are similarly extended to Mr. Braddock, who speaks with equal conviction on this vital subject. Both will wholeheartedly acknowledge the voluntary and energetic support that we have all received from many quarters, including all those members of this Institute and of all the allied societies throughout the country. Without that help and support, which has exhibited a wonderful example of team spirit, this effort would have lost its impetus and value. Just as this Institute may claim to have been the first professional body to have produced on a voluntary basis a master plan for the Greater London area, so likewise we are now the first to undertake on similar conditions the greater and vitally urgent task of sketching out a National Plan. Unlike administrative planning, creative planning cannot rely upon the typewriter. It must revert to the map, and the immensity of the sketch may be seen on the screens in the foyer. It is an effort to visualise a National Plan in graphic form based on a comprehensive study and a balanced regard for the inter-relationship of all aspects of this great problem without—and I stress that word—giving undue emphasis to any particular facet of the subject. It cannot, however, end here, for this is merely the prelude or first stage to greater and more detailed efforts in the future.

It has been stated that efficient executive joint planning authorities are being set up throughout the country, but that a Government National Plan is not feasible. In all humility I ask are we, therefore, to be satisfied with and content to continue the deplorable mistakes of the past when local authorities worked in adjacent areas regardless of their respective activities? I can mention two adjoining seaside towns only 50 miles distance from here, where, in spite of a Joint Planning Committee, this process is unbelievably at work at the present time. How can two authorities so placed possibly consider their respective problems of inter-communication alone, apart from other manifold vital interests, without the closest co-operation and co-ordination? Yet there they proceed zealously and jealously regarding each other's efforts and the same conditions prevail in many parts of the country. Heaven forbid that I should overstate the case. Unless all our authorities are working on a skeleton framework which has been outlined for the whole country, and which admittedly must be flexible, no local authority can possibly proceed with its reconstruction problems in any confidence that it is working on right and sound lines. Furthermore, how can we anticipate any improvement upon our present legacy of muddle and chaos?

It is for these reasons that we so urgently advocate a National Plan. To us it appears to be but commonsense, or should I say uncommon-sense? Consequently under Mr. Kenyon's chairmanship we have striven to show that a National Plan can and should be prepared. It gives me very great pleasure to second the vote of thanks to Mr. Kenyon for his excellent leadership, and for the admirable Paper that he has prepared to explain the work of this Committee, and also to Mr. Braddock for his able deputising.

Mr. Herbert Welch [F.] asked what proposals the Committee had to make for air transport.

Lt.-Col. H. P. L. Carl de Lafontaine, O.B.E. [F.] As a member of this Institute and of the Town Planning Institute, may I say that we of the T.P.I. do welcome this move forward, because the more that is said, discussed and popularised with regard to planning, the more it will help to bring it about. I think that we always tend to speak to the converted. One big difficulty with regard to anything like a National Plan is that in a democratic country, if you plan as is proposed on these maps, you will always get the local authority type of mind mentioning Hitlerism, Mussolini and a few other things. The real essence of the matter seems to be to get your scheme in the form in which you are showing it now, but to start at the other end when it comes to the practical application of it, or, in other words, interest your local authorities and go on with your educational side of the plan and get the support of popular opinion so that you can move.

Dr. Malcolm Sargent: I speak with all temerity here. Perhaps I can speak as someone who is engaged in entertaining the public. I realise that in our planning we have got to provide suitable halls in which the ordinary people can get their evening's amusement. I take it that in the future there should be more and more time for the average man. That is what everybody is aiming at, that there should be

more money with less work, and that, therefore, there would be hours in which the public has to be entertained. We who are entertainers will do our best to provide the music or the theatrical performance or whatever it may be, but we must have halls in which to do it. I speak with all respect to the present learned company, but too often halls are built—town halls or whatever they are—halls of assembly in the towns without really detailed consideration of the purposes to which they might be put. I am naturally thinking of a hall capable of holding a choral society, which is one of the best means of musical recreation for the ordinary person, or halls for a visiting or resident orchestra. I have in mind modern buildings with which I am acquainted, with regard to which the architect unfortunately did not appear to know the width of a grand piano and where the space on the platform was wrong. I remember talking to a very distinguished architect and asking him how many theatres he had built. He had been responsible for quite a number. I said: "Do you know the width required for two fiddlers to sit side by side?" He admitted that he did not. I said: "Then how can you plan a theatre unless you know how much space to leave under the apron of the stage?" If that is six inches too wide, it is wasting the space, and if it is six inches too narrow, you cannot get the musicians into it. You may say: "Why not put three fiddlers side by side?" Never do three fiddlers play side by side, but always two at a desk. Many theatres are designed by architects who do not know the height of a double bass or the height of a bassoon player sitting in a chair. I am at the moment thinking of two modern buildings, in one of which it is practically impossible to put an orchestra or choir, because of two ornamental lions placed right in the centre of the stage and where the organ also is in the wrong place. In the other building there are two aisles right through the choir which do not come at the right place as regards the voices. Your sopranos are divided. There are two gaps which could seat another four people abreast on each step because they have put immovable steps. The steps could have been made movable and taken away when they were not required. When halls are built, as part of their planning, do realise that they may be needed for music or for the theatre. It would be advisable perhaps to have some knowledge of the space required to seat an orchestra, a choir and the number of people who are likely to be in the building. A building was erected in London purposely to seat an orchestra of 114 players. It would seat 114 persons, but the architect forgot that the players had instruments as well. It was possible to get in only about fifty persons, I believe, with their stands, music and instruments. The hall has never been used. It is supposed to seat 1,500, and it can actually seat 300 if you put them all in the gallery.*

Mr. A. J. Lyddon (Chief Engineer, Ministry of War Transport): I wonder if, as an engineer, I might say a word or two? You were kind enough to direct my attention to this Paper, and as one who has had something to do with planning from the Communications side, I would like to put in a plea for what I am going to describe as a marriage between the engineer and the architect. It is the province of the architect to show the best method of doing the ideal. The province of the engineer, as I view it, is to see how it can be put into effect. Your Institute is to be congratulated upon the manner in which it has presented this National Plan, and now the various interests with their co-operation will, I hope, be able to translate it into terms of practical idealism.

The Chairman stated that the question of publication of the plan would come before the Council at its next meeting.

The vote of thanks was put to the meeting and carried with acclamation.

Mr. Henry Braddock (in reply): First of all, I would like to welcome very much Lord Samuel's reminder to us that the family is the basis of our society. I think that it is an extremely important matter, and I am sorry that mention of it was not made in the Paper.

With regard to Lord Samuel's point on urban transport, it has entered the mind of the architect, and the results of his deliberations on that matter with regard to London at least are illustrated on the London Plan, which was exhibited in London two years ago. We there went very carefully into this question of urban transport and the question of the development of the Tube system. We made some very definite recommendations. That information is still in the form of a report, and the major diagrammatic drawing of the whole of the London region is also in the foyer.

* Members may be interested to be reminded, in connection with Dr. Malcolm Sargent's remarks, that the most complete analysis of the musical requirements in planning concert hall platforms yet published was an article in the R.I.B.A. JOURNAL, 16 May 1936. This article, which was fully illustrated, dealt with most of the points raised by Dr. Sargent. It was written in collaboration with the B.B.C. and with the personal advice of Sir Henry Wood.—Ed.

I am very glad that Mr. Denman so properly and so rightly referred to the efforts that were made by certain members of the allied societies. They have done a tremendous work under very great difficulties. I know how busy those men have been and they have devoted what should have been their leisure-time to this work.

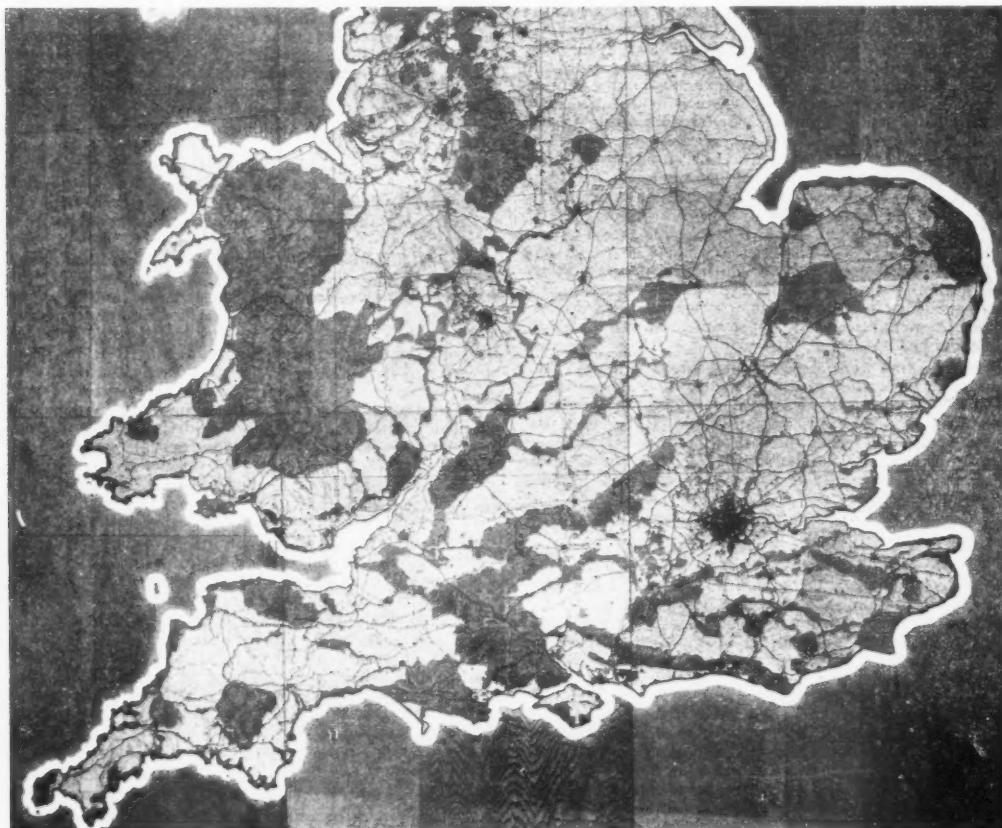
Mr. Welch asked about the question of the air. We discussed that matter at some time. The question is in fact in the air. There is not really sufficient information forthcoming from the Government and other sources for us to make any sound decision on this subject. I will say, however, that if it is going to be a matter of international airports, that is to say, large airports which will receive into this country the trans-polar, trans-continental, trans-Africa traffic, to my mind, at any rate, they can be placed, subject to weather and perhaps subject to the aircraft industry, almost anywhere in the country. My feeling about it is that these huge air liners will come in, and from those ports we shall move by air taxi to the local aerodromes. The local aerodromes are really a subject which must be considered under regional and local planning.

Colonel de Lafontaine raised the question of local authorities, Hitlerism, education, and so on. I entirely agree with him. This is a matter of education, and I believe that it is up to the architect particularly to spread abroad his feelings about planning and what it really means. Let the informed bodies of opinion in this country be gathered together for discussion. Let us get their reactions, but at the same time let us impress them with our argument with regard to the need that there is for this planning idea.

With regard to what Dr. Malcolm Sargent said, this question of entertainment has also been considered by the architects. I am sorry that Dr. Malcolm Sargent criticised our efforts with regard to the orchestra pit. Perhaps mistakes have been made, but when we are talking of planning in this broader sense, we still keep in mind your requirements and the needs of the public with regard to entertainment. I would refer you again to the London Regional Plan. We have illustrations in detail showing how the living area, as it might be termed, in such a place as this London region will be dealt with. We have shown that each one must have its properly built and equipped centres in which the people living in those areas can obtain that very necessary service, if I might call it so, of entertaining in all forms. He will have, in my opinion, both his theatre and his concert hall, and it will not be the same building, because I do not think that you can make one building do the two jobs in that case. That is there for you to see if you will be good enough to look at it.

Mr. Lyddon made one remark and he mentioned practical idealism. That is a fine term. We have really got to get down to practical idealism. I believe that the Plan that we have begun to produce is practical idealism. It is in its first stage, but the mistake that we so often make is to emphasize the practical without the idealism. If we continue to do that we shall continue to reduce our lives to a state where it will hardly be worth living. We must have idealism and that is the whole background of good living.

I wish to thank you very much for your vote of thanks.



GENERAL MAP

This shows the relationship between each form of transport, i.e. road, rail and canal, together with recreational open space as separately illustrated by diagrams shown on another page.

The important bearing of transport facilities on the location of new industrial centres is emphasised by marking these places on this map.

RECENT DEVELOPMENTS IN LIGHTWEIGHT CONCRETE

By T. W. PARKER, M.Sc., Ph.D., F.R.I.C.

A Paper read at a meeting organised by the Architectural Science Board at the R.I.B.A. on
Wednesday 22 November

1. General

Lightweight concretes are not at all new in building, nor has there been any very outstandingly new development with them within recent years. There has been, however, a steady growth of experience and development, particularly within the last ten years, and it seems appropriate now to review the present position, with, perhaps, some emphasis on the possibilities that may be offered by lightweight concrete as a contribution to post-war housing.

As the name implies, lightweight concretes are those which are lighter in weight than ordinary concretes, that is to say, lighter than the 120-150 lb. per cu. ft. concrete obtained with gravel, crushed stone, or other dense aggregates. Lightweight concretes, in fact, are usually within the range 50-90 lb. per cu. ft. These low weights are obtained either by using an aggregate which is itself light in weight or by creating numerous air or gas cells in cement mortar in such a way that the cells are uniformly dispersed throughout the mortar and remain when the mass has set and hardened. A combination of the two methods can, of course, also be adopted.

More lightness in weight, however, although useful in some situations, would hardly be sufficient to justify any extensive development; interest in the material, in fact, arises chiefly from other properties associated with the decrease in weight per cubic foot. These properties are, briefly:—

- (i) Lower thermal conductivity than that of ordinary concrete, i.e., increased thermal insulation when used in similar thickness in buildings.
 - (ii) Increased ease of cutting, nailability and nail holding power.
 - (iii) Increased suitability as a base for rendering, or plastering.
 - (iv) Maintenance of good fire-resistance properties.
- These favourable properties are accompanied by some which are less favourable, notably:—
- (v) Lower strength.
 - (vi) On the whole, rather higher dimensional changes on wetting and drying.

Permeability to water is also very much increased. This factor is discussed later in relation to rain penetration. Sound insulation, in so far as it is directly related to the weight of the material, is obviously less efficient in lightweight concrete than in similar thicknesses of ordinary concrete. Lastly, there is the question of durability, into which may enter many factors, including situation of use in the building, soundness of the aggregate, magnitude of the moisture movement, etc.

Clearly, if the effects of the less favourable properties can be reduced to a minimum, while leaving the favourable properties unchanged or even improved, then lightweight concrete construction can stand on its own merits, not as a substitute for orthodox or more traditional methods, but as a direct alternative. Progress within the last ten years has, in the main, been towards this goal, and the present stage is the sum of a number of steps of improvement in diverse aspects of both production and use. It is instructive to examine these steps in more detail, first to show what improvements have been made in methods of pro-

ducing lightweight concrete, and second, to examine the developments in methods of use. In the present lecture, concretes and products made with lightweight aggregates only are considered.

2. Lightweight Aggregates

The most common aggregates used for making lightweight concrete can be listed as:—

- (i) Furnace clinker.
- (ii) Pumice or other lightweight naturally occurring materials of a volcanic origin.
- (iii) Specially manufactured aggregates, such as expanded shales, clays, slates or slags and expanded vermiculite.

Concrete made with furnace residues has been quite widely used in the past and earned a doubtful reputation through fairly frequent failures. The cause of these has been traced, however, and a British Standard for clinker aggregate has just been issued which contains tests to eliminate unsuitable material. The particular merit of clinker as an aggregate is that sources of supply are plentiful and it is cheap. Against this, it compares unfavourably with other lightweight aggregates in that concretes made with it tend to be heavier, the thermal insulation for equal thicknesses is less, and the strength of the concrete is also less. It cannot be used in contact with steel, for it causes corrosion of the metal.

Pumice concrete has also been used in this country and in Germany. In its best form, that is when washed free of clay, shale, or other minerals, pumice is a lightweight aggregate imparting excellent properties to the concrete in respect of lightness in weight and thermal insulation, and relatively low moisture movement. The strengths obtainable are less than those of the manufactured group, and there are no natural resources in this country; the material has to be imported.

An increasing use of specially manufactured lightweight aggregates is a main development in lightweight concrete technique over the last ten years in this country and over a longer period abroad. With their aid, a fairly wide range of concrete properties can be obtained by suitably adjusting the mix proportions, the series extending from those of a lightness and thermal insulation value approaching that of pumice to those showing strengths approaching that of ordinary concrete while still remaining considerably lighter in weight. No questions of unsoundness arise with them and since potentially suitable raw materials of one or other type are fairly widespread, there is the possibility of a source of supply close to the centres of use. These, therefore, are the aggregates of most interest in a survey of recent developments.

Expanded clays, shales and slates are made essentially by heating the raw materials in a rotary kiln up to a point where fusion begins, without heating to the stage at which they are completely molten. At this point, a bloating takes place causing the product to become cellular and on rapid cooling, the cellular structure is retained. The bloating is probably caused by the liberation of gases, which are unable to escape once the material has begun to fuse. All clays and slates are not necessarily suitable for this process but preliminary small-scale tests can be made in advance to test the suitability or otherwise.

Expanded slags are made by a different process. Blastfurnace slag is most commonly employed and no heating process is necessary since it is treated as it is obtained completely molten from the blastfurnace. The molten slag is brought into contact with a limited amount of water which is converted into steam by the heat of the slag and causes the latter to foam into a spongy, porous mass, which, on further cooling, retains the cellular structure. This final product is then crushed and graded.

While there are differences in the properties of concretes made with these different products, i.e., clays, shales, slates, and slags, it is doubtful whether the differences are great enough to have much significance from the user's point of view. They may call for slight modifications in the technique of making the concrete, but when these adjustments have been made, the results in the finished product are quite similar. In this country, most experience within the past ten years has been with expanded, or "foamed" slag. On the Continent, too, expanded slag has probably been used more than any other manufactured product. In the United States, however, there has been considerable experience with expanded shales and clays as well as with expanded slags.

Expanded vermiculite is in rather a different class from the others. It is made by heating the natural mineral vermiculite, a micaceous mineral, and the resulting expanded product is the lightest of all lightweight aggregates. The graded product may weigh as little as 6-8 lb. per cu. ft., and correspondingly very light concretes can be made with it. Vermiculite is not a native mineral of this country, and it has hitherto been produced mainly in the United States. Deposits have, however, been found in South Africa. It is many times more expensive than the other types even in the United States and this is likely severely to limit its use to special applications.

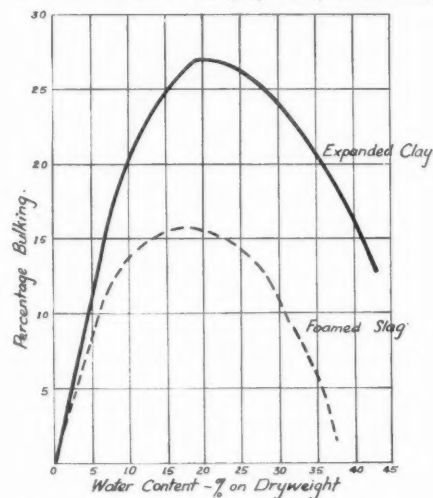
The Properties of Lightweight Concrete

We have seen that on the materials side, a recent advance has been in the increased use of manufactured aggregates. Advances in the concrete itself have lain in the direction of the study of the concrete-making process and of the collection of data on the properties of the materials needed for design purposes to use the concrete more scientifically. These items are reviewed briefly below.

The guiding principles in lightweight concrete-making are not exactly the same as those in making ordinary concrete, for the objects to be attained are not the same. The use of the water/cement ratio as a means of controlling strength can be adopted with dense concrete, because conditions are adjusted so that as near the maximum compaction as possible can be attained. The aggregate grading is selected to give a mix of good workability, so that this maximum compaction can be achieved. In contrast, except for certain uses, such as cast *in situ* flooring, the present technique for lightweight concrete in this country is almost directly the opposite of this. The mixes usually are of poor workability and something short of maximum compaction is the deliberate aim, so that the resulting concrete is light, not only by virtue of a lightweight aggregate, but also because it has an additional porosity through incomplete compaction. Except for this aid in emphasising lightness in weight poor workability has no other obvious intrinsic advantages in making precast units, but in casting vertical sections, such as walls, *in situ*, it is probably a contributing factor in enabling light and simple shuttering, including expanded metal shuttering, to be used. Like no fines concrete, this type of lightweight concrete has little or no hydrostatic head and does not bleed through the expanded metal. The water/cement ratio as a means of strength control has, therefore, less meaning, although, of course, control of mix proportions, including water content, is of first importance if uniformity is to be maintained from one batch to another. This close control is the more important because, both for lightness and for good insulation, lean mixes are far more common in lightweight concrete than in dense concrete; they may extend to 1:12 or 1:16 cement:aggregate by

volume. In such cases slight variations in proportioning, particularly of the cement content, may lead to considerable variation in strength. It cannot be too strongly recommended that the cement should be proportioned by weight, in order to avoid the variations which may occur through volume proportioning. In America, there seems to be progress in the direction of proportioning all the solid ingredients by weight.

The manufactured aggregates are all produced in a dry condition, but in transport and site storage, they may, of course, become wet. In such conditions, "bulking" of the aggregates, particularly the fine aggregate, can occur, just as with natural sand. The illustration shows graphically the bulking of light-



BULKING CURVES FOR
LIGHTWEIGHT AGGREGATE SANDS.

weight clay and of foamed slag at different moisture contents. If accurate proportioning for maximum uniformity is to be achieved, this effect should be taken into account, just as in making high grade dense concrete.

Lightweight aggregates are porous and often have a pitted or honeycombed surface, and account has to be taken of these in making the concrete. If the aggregate and cement are mixed dry and water then added, the effect is to fill up the pits with cement paste, part of the water is abstracted into the interior pores of the aggregate and the mix is made not only less workable, but the individual grains of aggregate are not properly coated with cement paste and a weaker concrete results. The best method of making seems to be to mix the aggregate and water first, then add the cement slowly. However, this feature is, perhaps, more important with some aggregates than with others. It is a good working rule with foamed slag aggregate which takes up the greater part of the water it can absorb very rapidly, but possibly less important with expanded clay, which absorbs water, in the initial stages, more slowly.

In connection with proportioning and mixing technique, it is interesting that, as far as can be judged from the literature, there is some difference between practice in this country and in the United States. The practice there seems much more to treat lightweight concrete in the same way as dense concrete, that is, to adjust aggregate gradings to give maximum workability and to have less pore space between the aggregate particles. The concretes tend, therefore, to be stronger and heavier—lightness in weight, in fact, depends almost entirely on the lightness of the aggregate. Some advantages which can be gained in this way to offset the loss in insulation, etc., are discussed in a later section.

The data of most interest to the designer, that is data on weight, strength, thermal insulation, and moisture movement for different

LABORATORY DATA ON FOAMED SLAG CONCRETE.

Cement sand (vol.)	MIX PROPORTIONS (VOL)		Water/cement ratio (wt)	COMPRESSIVE STRENGTH ⁽¹⁾ [lb./sq. in.]		WEIGHT per cu. ft. at 3 months (lbs)	DIMENSIONAL CHANGES (LINEAR %)		THERMAL CONDUCTIVITY Btu ft./sq. ft./hr./in./°F (specimens matured at 64°F & 65% relative humidity)
	Fine foamed slag	Coarse foamed slag		28 days	3 months		Drying shrinkage	Moisture expansion	
1	1	2	0.45	4495	5213	114	0.056	0.044	—
1	1½	4½	0.67	1150	1220	85½	—	—	—
1	2	4	0.74	1540	1722	83	0.049	0.043	2.2 (at 81 lb/cu ft.)
1	3	3	—	—	—	83	{ 0.053 0.023 when steam cured }	{ 0.048 0.031 }	2.2 (at 83 lb/cu ft.)
1	2	6	0.87	710	770	75			
1	3	6	1.05	644	680	81	0.044	0.041	—
1	2½	7½	1.13	600	710	79	0.042	0.034	{ 1.02 ⁽²⁾ (at 41 lb/cu ft. and 4.1% free water content) 1.7 (at 68 lb/cu ft. and 4.1% free water content) 1.9 (at 71 lb/cu ft. and 5.5% free water content)
1	4	8	1.39	463	560	76	0.044	0.037	—
1	3	9	1.29	540	600	71	0.043	0.033	—
1	4	12	1.75	380	420	67	—	—	—
1	6	12	2.11	257	306	70	—	—	—

(1) After maturing under damp sacks for 7 days, then in air at 64°F and 65% relative humidity.

(2) Made from a specially selected very light aggregate with little tamping in filling moulds.

mix proportions and different aggregates are slowly being gained. At the Building Research Station, a systematic collection has been obtained on foamed slag concrete, although results have not yet been published in full. As a guide to the range of properties a selection of data is given above. A useful collection of similar data on the American lightweight clay aggregate "Haydite" is given in the *Haydite Manual*.

Uses of Lightweight Concrete

The advances in aggregate production, in concrete-making, and in the accumulation of data on properties, can only be really effective when they are accompanied by corresponding advances in methods of use. In fact, the use of lightweight concrete has now spread much further than its original function as an interior partition material, and extends to external wall, floor and roof construction. Advances in these now depend on the scientific application of the material, that is, by the most efficient use of the material, to provide as closely as possible the properties required ideally for the function of the particular element of structure. In the following notes, more detailed consideration is given to lightweight concrete walls as a particular example, and a brief summary only given of floor and roofs.

Lightweight Concrete Walls

Lightweight concrete can be used in external walls either for the panel infilling of framed structures, or the lightweight concrete can be load-bearing. In either case, the material may either be cast *in situ* or may be in precast units of varying size and shape. By any of these methods there are at least four general requirements the wall elements must fulfil. They must resist rain penetration, they must be durable, they must give sufficient thermal insulation, and they must have adequate strength. They may, in certain circumstances, be required to give a high degree of fire-resistance, but the requirements in this respect for dwelling-houses are not rigorous and easily met by any of the lightweight concretes. The four major requirements are discussed separately.

Rain Penetration

Lightweight concretes are much more permeable to water than are ordinary concretes; the open textured lightweight concretes such as are mainly used in this country are sufficiently permeable in fact to allow a stream of water to pass through them virtually without interruption. Their behaviour in this respect is much more similar to no fines concrete than to fine pored material, such as dense concrete or bricks. There is

little tendency for the rain to pass through the wall by capillary effects, but water entering, say, at the top of the wall, will trickle downwards under gravity, spreading sideways as it threads its way through the pores or channels in the material in much the same way as water might filter through a bed of stones. If the wall is built of blocks, there is probably a greater chance of rain penetrating to the inside face than if the concrete is cast *in situ*, because the mortar between the blocks has a finer pored structure than the block itself, and therefore tends to be more of a barrier than the material in the block. The accumulated water will then tend to spread sideways.

Laboratory tests do, in fact, show that moisture penetration can take place through unprotected walls, and while it may be that in sheltered sites or in special cases of low walls with good eaves protection rain penetration does not occur, the evidence is that it is safer in all cases, and probably essential on exposed sites, to give protection by means of an external rendering to solid lightweight concrete walls. True cavity walls obviously do not require this, providing drip holes are located in the external face, with suitable drainage detail at the foot of the cavity, but walls made of cored blocks, especially when of the open textured type of mix, should probably be treated in the same way as the solid wall.

The standard of protection, however, need not be very high in order to achieve complete exclusion of rain. Tests at the Building Research Station have shown that one coat, $\frac{3}{8}$ in. thick, of a cement-lime-sand rendering (1:1:6 by vol.), finished while still green with a thrown-on finish sufficient to give a sanded texture to distribute such shrinkage cracks as may form, in the first coat, is quite adequate. The normal forms of external rendering based on cement-lime mixes, are also adequate. Probably, this good result may be attributed to the good base which a lightweight concrete provides for rendering, together with the absence of capillary effects on any rain which does penetrate the rendering.

The aesthetic appearance of unrendered open textured lightweight concrete block walls is not usually considered to be sufficiently pleasing to leave uncovered and a rendering treatment is, therefore, desirable on this score also. But there is room for some investigation on both grounds, especially to determine whether a compromise to produce a less porous block with a closer grained texture might not be sufficiently resistant without protection or protected, say, by cement paint only.

Durability

Given that the material is protected by a rendering, the question of durability against freezing and thawing and against ordinary weathering agencies scarcely arises. It is interesting, however, to note that Wendt and Woodworth (*Amer. Concr. Inst. J.*, Nov. 1939) in investigating the durability of American lightweight concrete blocks conclude that for good durability a fairly high strength (900 lb. per sq. in.) and a restriction on the rate of water absorption is required. The strength requirement is in excess of that of lightweight blocks as normally used here, and there is, therefore, additional support for the need for a rendering. It will be seen that both from the rain penetration and durability point of view, it is a question of using either a porous concrete with a rendering or exploring further the possibilities of a stronger and more impermeable mix, after the American technique, with, say, a cement paint finish.

An item which may be included in durability considerations is that of the possibility of cracking due to shrinkage movements. Precautions should obviously be taken to minimise these. For example, in block construction, adequate maturing or steaming before the blocks leave the manufacturers' yard is essential, while it is also essential to use a relatively weak mortar of the cement-lime type in building. The latter principle is now well established when building with blocks having a moisture movement and applies to lightweight concrete, concrete bricks and sand-lime bricks alike.

Thermal Insulation and Strength

When lightweight concrete is used only as a panel infilling, the strength requirements of the concrete are only of very secondary importance compared with the provision of good insulation, but when the wall is load-bearing the material must obviously be of adequate strength, as well as fulfilling the insulation requirements. The load-bearing wall is the more interesting of the two to consider. In lightweight concrete, it has not so far been used extensively in this country, but there is a more considerable experience abroad.

If the special case of house-construction is considered, a guide both to loading requirements and to the most desirable insulation value at which to aim for small houses has been set out in the Report of the Committee on House Construction (the Burt Committee). Using the present technique in this country of lean mixes giving a porous concrete and a definite limitation in strength, the stability requirements can be met by adopting a suitable thickness of wall. The thickness required for stability usually gives a thermal insulation in excess of what is considered economical. Regarded only from the fuel efficiency angle the insulation provided might almost be considered uneconomically too good. Given sufficiently accurate data on the properties of different mixes, it ought to be possible to choose a concrete having the correct insulation value and the correct strength for a minimum thickness of wall. For example, it can be calculated, using values assessed from available data, that if the insulation desired is the equivalent of that achieved by the normal 11 in. cavity wall, stability requirements and insulation requirements would be met in small house construction by a 4½ in. thickness of 1:1½:4½ foamed slag concrete. If the higher standards of insulation recommended by the Burt Committee are followed, the stability and insulation requirements are met by means of a 6½ in. wall of 1:3:9 foamed slag concrete cast *in situ*, solid cast *in situ* walls being considered in all cases. These figures are quoted only as examples to illustrate the point under consideration. The assessed values would require laboratory confirmation and the relation of laboratory strength values for the particular mixes to those obtained in practice for the same mixes would need to be determined before they could be used as definite recommendations.

While this relation of thickness, strength and insulation would be a step in the direction of maximum efficiency, other relevant factors must not be overlooked. Thus we have seen that in casting *in situ*, there are considerable advantages in simplification of the actual casting process by using the porous, lean mixes.

If the thickness-strength-insulation requirements pointed to the use of a strong mix, the advantages in efficiency on this score would have to be balanced against the loss of advantages in casting. In the second example quoted above, it will be seen, in fact, that these circumstances do not arise; a lean mix is deduced as appropriate for strength, etc., and one which would probably retain the advantageous casting properties. One further point may also be noted, that such a lean mix would probably be less prone to shrinkage cracking on drying.

Entirely different factors have to be balanced against the thickness-strength-stability relations if the wall is to be built in precast blocks, particularly in blocks of a size suitable for handling by one man. Here the shape and weight must be convenient for handling and there are also limitations on the dimensions, which should, preferably, be suitable multiples of brick sizes. Superimposed on this there is the question of the use of an external rendering or the alternative of the use of a sufficiently strong and low-porosity product to be able possibly to dispense with a rendering. It is interesting to note that the standard nominal 18 in. × 9 in. × 9 in. cored block in foamed slag concrete of about 1:3:6 to 1:4:8 proportions almost meets the thickness-strength-insulation requirements, and has suitable dimensions in respect to relation to brick size. This mix, however, needs a protective rendering.

At the other extreme, in using the denser blocks, it is more difficult to find a suitable single value and it is largely a matter of balancing the usefulness or otherwise of dispensing with a rendering against the provision of a block excessively strong from the stability point of view. American experience is less helpful in this case, because the unit sizes are of a different order from those which could be used here without abandoning attempts to make the dimensions multiples of brick sizes.

The subject is obviously one in which further development work might well be fruitful.

Existing Examples of External Wall Construction

An early example of the use of lightweight slag concrete blocks for a panel infilling is that of the Fire Offices' Committee's Testing Station at Elstree. The panels have a cavity construction made up by means of angle blocks and solid blocks. This building was erected in 1934.

Two very recent examples illustrate the use of precast units for load-bearing walls. The first is that of a pair of agricultural cottages at Timberscombe in Somerset (architect, Mr. Bridgwater) in which a cored block unit, 18 in. × 9 in. × 9 in., with two cavities, was used. The other is that of the use of very large units, up to 10 ft. square in area, by the Glasgow Corporation Housing Department, the scheme being devised by the Chief Architect, Mr. Ferrie. Cored blocks and solid blocks have also been much used on the Continent and in America.

The Glasgow experiment involves the use of tackle for handling the units and is of interest as much in the new method of construction as in the properties of the finished wall. The smaller blocks, however, use a technique of building not essentially far removed from bricks and mortar and stand in strict comparison. Leaving aside the question of whether or not it is quicker or easier to build in these units larger than bricks, the question may well be asked wherein there is any advantage over bricks and mortar. The answer lies chiefly in the possibilities of improved insulation and in nailability and ease of cutting. The disadvantage is in the greater care necessary to avoid shrinkage movements.

There are fewer examples of cast *in situ* work either here or abroad, but some do exist. As has been noted earlier, the advantages over casting in ordinary concrete are in the simpler type of shuttering needed—expanded metal on frames behaves well—in the quicker drying of the concrete and in its better insulation, which in particular leads to greater freedom from condensation. There are also advantages over no fines concrete, both in insulation and in ease of cutting and nailing. No fines concrete has, however, the advantage in lower shrinkage movements.

Floors and Roofs

There have been a number of examples in which lightweight concrete has been used as an insulating layer over concrete, and some cases where reinforced lightweight concrete floor slabs have been adopted. In this country there has been very little development of precast lightweight concrete floor beams or slabs, although various designs have been used both in America and in Germany. There would seem to be room for further exploration of these in this country, especially for housing, if the timber shortage continues after the war. The functions to be performed would seem to call for the use of the less porous, richer lightweight concrete mixes, which, however, would still be expected to be nailable and of moderately low thermal conductivity. A weight saving over ordinary concrete of perhaps one-third might be expected.

LITERATURE

There have been a fair number of technical publications on lightweight concrete. The following list gives a very brief selection of relevant papers:—

- "Lightweight Concrete Aggregates," F. M. Lea, Building Research Bulletin No. 15, H.M. Stationery Office, 1944.
- "Lightweight Concrete Aggregates," F. T. Moyer, U.S. Bureau of Mines Information Circular No. 1, C7195, 1942.
- Reproduced in *Cement, Lime and Gravel*, 1942, p. 54, 77 and 105.
- "Properties of Breeze and Clinker Aggregates and Methods of Testing their Soundness," F. M. Lea, Building Research Bulletin No. 5, H.M. Stationery Office, 1928.
- "Corrosion of Steel by Breeze and Clinker Concretes," F. L. Brady,

- Building Research Special Report No. 15, H.M. Stationery Office.
- "House Construction," Post-War Building Studies No. 1, H.M. Stationery Office, 1944, pp. 120-125.
- "Foamed Blastfurnace Slag," T. W. Parker, Iron and Steel Institute, Special Report No. 19, The Institute, 1937.
- "The Haydite Manual," compiled by J. B. Cleasy, The American Aggregate Co., Kansas, 1940-41.
- "Die Verwendung der Hochofenschlacke," A. Guttman, Dusseldorf, 1934, pp. 313-344 and 358-374.
- Also British Standard No. 877, 1939, for foamed slag.
- Also British Standard No. 1165, 1944, for clinker.
- Also British Standard No. 834, 1939, for precast blocks for walls.

NOTES FROM THE MINUTES OF THE COUNCIL, 14 NOVEMBER 1944

APPOINTMENTS

Housing Committee

Mr. Frederick Gibberd [F.] as an additional member.

British Standards Institution : Committee on Paper Underlays

Mr. J. H. Greenwood [A.].

Council for Education in Appreciation of Physical Environment

Mr. E. A. L. Martyn [F.], in place of Mr. Basil M. Sullivan, who has resigned.

Delegates to National Conference of the Town and Country Planning Association

Lieut.-Colonel H. P. Cart de Lafontaine [F.].

Hon. Auditor

Mr. J. D. Hossack [F.], in place of the late Mr. Ronald Topham.

Town and Country Planning Committee

The following were appointed to serve on the Town and Country Planning Committee for the Session 1944-1945:—

- | | |
|----------------------------|-----------------------------------|
| Mr. Charles Woodward [A.] | Mr. A. W. Kenyon [F.] |
| Mr. Henry Braddock [A.] | Dr. H. V. Lanchester [F.] |
| Mr. W. Dobson Chapman [L.] | Mr. Arthur Ling [A.] |
| Mr. Brian Cooper [F.] | Mr. S. R. Pierce [F.] |
| Mr. W. R. Davidge [F.] | Professor Sir Charles Reilly [F.] |
| Mr. J. L. Denman [F.] | Mr. H. J. Rowe [F.] |
| Mr. J. Murray Easton [F.] | Mr. Gordon Stephenson [F.] |
| Mr. J. H. Forshaw [F.] | Mr. Basil M. Sullivan [F.] |
| Mr. D. E. E. Gibson [A.] | |

It was decided to ask the Town and Country Planning Committee to form three sub-committees to deal with (1) Legislation; (2) Liaison with the T.P.I. and Education; and (3) Planning, and that the last named should be instructed to continue the work of the present Central Planning Advisory Committee.

"Ad hoc" Committee on Building Research

The Council approved a recommendation of the War Executive Committee that an *ad hoc* Committee should be appointed to consider the whole question of Building Research, and the following were appointed to serve:—

- | | |
|-------------------------------|----------------------------|
| Mr. P. V. Burnett [F.] | Mr. Denzil Nield [A.] |
| Mr. D. E. E. Gibson [A.] | Mr. Richard Sheppard [A.] |
| Mr. Joseph Hill [F.] | Mr. C. G. Stilman [F.] |
| Mr. L. W. Hutson [F.] | Mr. Basil M. Sullivan [F.] |
| Mr. Alister G. MacDonald [F.] | Mr. R. Wakelin [A.] |
| Dr. J. L. Martin [A.] | Mr. F. R. S. Yorke [F.] |

Teaching of Architectural Appreciation in Schools

It was reported that a deputation headed by Mr. Basil M. Sullivan [F.], Chairman of the Board of Architectural Education, was received by the Deputy Secretary of the Ministry of Education on 20 July, when it was urged that consideration should be given to means by which architectural appreciation might be evoked in teachers as the first step towards the inculcation of such appreciation in school children. The deputation was assured that the importance of the matter was appreciated by the Ministry and that practical steps to this end would be taken.

Proposed Joint Conference on School Buildings and Equipment

The Council agreed to co-operate with the Association of Building Technicians and the National Union of Teachers in the organisation of a Conference on School Buildings and Equipment.

Gift of Water Colours by the late Mr. E. C. Bewlay [F.]

The thanks of the Council have been conveyed to Mrs. E. C. Bewlay, who has presented to the R.I.B.A. water colours by her late husband of "Dubrovnik (Ragusa, Yugoslavia): View from Harbour," and "Caernarvon Castle."

OBITUARY

The Acting Secretary reported with regret the death of the following members and Students:—

- The Archbishop of Canterbury, The Most Rev. and Rt. Hon. William Temple, D.D., D.Litt. [Hon. F.].
 - Marcus Evelyn Collins [F.].
 - Herbert Francis Thomas Cooper [F.].
 - Frederick Brice Hobbs [F.].
 - Percy Morley-Horder [F.].
 - William Sydney Trent [F.].
 - Edgar Wilson Creggan [A.].
 - Ernest Llewellyn Hampshire [A.].
 - Wilfrid Edwin Kelly [A.]. *Killed on active service.
 - Hugh Harvey [L.].
 - Arthur Matthews [L.].
 - Robert Hampton Clucas [Retd. L.].
 - Reginald Alfred Alabaster [Student]. Killed on active service.
 - Richard Arnot Robertson [Student]. Killed on active service.
 - Philip Matthew Todd [Student]. Killed on active service.
 - Eric William Traumer [Student]. Killed on active service.
- Messages of sympathy have been conveyed to their relatives.

MEMBERSHIP

The following members were elected:—
As Fellows (11); as Associates (22); as Licentiates (42).

Election December 1944

Applications for election were approved as follows:—
As Hon. Fellows (3); as Fellows (10); as Associates (35); as Licentiates (10).

Election March 1945

One application for election as a Fellow and three applications for election as Associates from overseas candidates were also approved.

Reinstatements

The following ex-members were reinstated:—

- As Associates: Thomas Randall Evans,
Joseph William Lee,
Eric Alexander Hector MacDonald,
Harold Edward Moore.
- As Licentiate: Frederick George Nicholls.

WAR DAMAGE IN ROUEN

REPORT FROM THE ARCHAEOLOGICAL ADVISER OF THE WAR OFFICE

General

As an architectural and historical ensemble Rouen is one of the most important towns in France and had always been greatly valued as such by the French themselves. It has suffered severely during the War. The three great medieval churches have all been hit from the air, though fortunately in each case the main structure has survived and they can be restored. The Palais de Justice, a magnificent specimen of the latest period of Gothic architecture was hit by a bomb and also gutted by fire; it will be possible to restore its external appearance but not to recover the interior decoration. In addition a large part of the old town has been destroyed, including the timber-framed houses which gave Rouen its special character.

It will be useful here to summarise the stages in which damage principally took place:—

- (a) German air-bombardment in June 1940 destroyed a portion of the old town, and the French in their retreat blew up the Pont Corneille.
- (b) Allied air-bombardment in the spring and summer of 1944—(especially heavy raids on 19 April, 30-31 May and 1 June) hit the churches and destroyed more of the old town. (None of the Rouennais with whom I have spoken have complained of this, but all have accepted it as part of the necessary price of liberation; some have however enquired why aeroplanes did not bomb from a lower level in order to secure greater accuracy.)
- (c) Destruction by the Germans before evacuating the town. This does not seem to have affected the Monuments apart from completing the destruction of the Palais de Justice.

The Cathedral

1939.—The old glass was removed from storage, and the sculpture of the west front, the Portail des Librairies and the Portail de la Calende were sandbagged. The tombs of Cardinal Amboise and of Louis de Breze in the Lady Chapel were likewise sandbagged.

June 1940.—A part of the roof of the south nave aisle was destroyed by incendiary bombs and, owing to shortage of timber, was replaced in concrete.

19 April 1944.—Three H.E. bombs hit the cathedral. The first demolished the 4th, 5th and 6th bays of the south nave aisle together with their chapels; the second similarly demolished the 8th, 9th and 10th bays; the third fell in the angle of the south transept and the south choir aisle. Though four buttresses and flying-buttresses of the nave (those between the 4th and 5th, 5th and 6th, 8th and 9th, 9th and 10th bays) were totally demolished, the 7th bay remained and appears to have been sufficient to hold the vault in position. Iron tie-rods have been inserted across the nave, and there is no sign of the vault spreading. The third bomb stripped a part of the facing off the S.E. pier of the central tower and also cracked it. Temporary walls have been built across the adjacent arches of the choir and transept, and the structure appears firm. At the same time two further bombs, which later proved to be empty cases, penetrated the aisle roof in the north-east corner of the ambulatory; one of them made a hole in the vault, but did no further damage.

1 June 1944.—The heat of houses burning in the neighbourhood set off an unexploded bomb in the Place Notre-Dame. This caused sparks to be thrown high enough to ignite the roof of the Tour St-Romain. The fire gutted the tower and melted the bells; the lead, though weighing 32 (French) tons, did not, however, destroy the vault above the lower storeys of the Capitular Library, but stopped before reaching the Archeveche.

Present Condition.—The west front is undamaged, apart from the gutting of the Tour St-Romain. The lower part of the transept façades is also undamaged; the rose-window of the north transept has lost its tracery, that of the south has bulged

40 centimetres outwards. The central tower and spire are undamaged. The south side of the nave is open to the air, all the windows are uncovered and there is a good deal of tracery gone. The structure, however, is stable and there is nothing which cannot with time be restored. The stalls and organ-case were damaged by blast in April, but steps were immediately taken to collect the fragments and they escaped the fire; they are said to be nearly complete. A considerable amount of carved stonework has also been rescued. All the sandbags put up in 1939 are still in position and in good order. The sculptures of the façades and the tombs in the Lady Chapel are therefore presumably all right.

Buildings near the Cathedral.—The buildings in the Cour d'Albane, the former cloister north of the nave, have been destroyed. The Chapter Library, flanking the passage leading to the North transept, is a shell, but retains its external walls. The Maison des Finances, an early 16th century building opposite the west front of the cathedral, is undamaged, but the Cour des Comptes a little further north, is practically destroyed, though a certain amount of carved stonework remains. The Archeveche, which adjoins the Cathedral on the east, is undamaged.

Saint-Ouen, 19 April, 1944. An H.E. bomb struck the roof of the North-east corner of the choir. It destroyed a portion of the roof, shifted a number of the timbers, and removed most of the slates off the choir and choir-aisles. It did not penetrate the vault, but one of the pinnacles in falling broke the vault of one bay in the North-East ambulatory. Apart from the breaking of a few pinnacles and of some tracery, there is no other damage inside or outside.

Saint-Maclou, 4 June, 1944. An H.E. bomb hit the church in the south-east corner of the apse. Two of the main piers of the apse are completely demolished and one of the chapels, together with the eastern part of the vault. The wooden roof of the choir held firm, though hanging in a void. Wooden scaffolding was erected and the roof is now safely supported. The remainder of the apse has been shaken, but iron bands have been placed round the piers to prevent them from spreading. The Central tower was also badly shaken (by the same bomb and by another which fell outside to the south of the church). An iron tie-rod which ran round the external gallery of the tower was split apart, but may have taken the bulk of the shock and so saved the tower. There are fissures varying from $\frac{1}{2}$ in. to 3 in. in the stone-work of the piers and of the lantern. So far as possible strengthening has been applied and tell-tales inserted. The structure appears to be stable. The west front is undamaged. In the interior the stalls were damaged, but the fragments have been collected and are fairly complete. The stone rood-beams, the spiral stone-staircase, and the organ case are undamaged. The doors attributed to Jean Goujon are also undamaged.

St.-Godard. Old windows removed 1939. Fabric undamaged.

St.-Madelaine. Untouched.

St.-Nicaise. Nave burnt 1937 and rebuilt in ferro-concrete—a successful design which harmonises with the flamboyant choir. Old windows removed 1939. No war damage.

St.-Patrice and St.-Romain. Old windows removed 1939. Fabric undamaged.

St.-Vincent. Old windows removed 1939. Church almost completely destroyed by a bomb which fell just to the west of it on 31 May 1944. Part of the west wall and of crossing still standing, but in a dangerous condition and will have to be demolished. Much of the woodwork has been salvaged. Tapestries said to have been removed, 1939. Lead angels by

Caffieri were packed in wooden cases which were shattered, but angels themselves hardly touched.

St-Vivien. Old windows removed 1939. Fabric undamaged.

Egypte de St.-Gervais, Ancien Choeur de St.-Paul, Chapelle de la Lycée Corneille (at present in use as a temporary depository for archives), and **St.-Laurent** (normally Musée Lessacq des Tournelles, of para. 16; at present in use as Temple Protestant), all undamaged.

St.-Eloi (Temple Protestant). Old windows removed 1939. Damaged by blast.

St-Marie-la-Petite (Synagogue). Largely destroyed.

St-Etienne-des-Tonnelliers. (Secularised; used as warehouse.) Demolished except for apse and part of walls which are unsate and hardly worth saving.

St-Pierre-de-Châtel (Secularised; used as warehouse). Demolished except for tower and apse.

St-Cande-le-Jeune (Tower incorporated in an office-block). Balustrade slightly damaged.

Palais de Justice. 19 April 1944. A bomb hit the west wing (Salle des Pas Perdus), destroying a part of the roof and wrecking the interior. On the night of 26 August 1944, the Germans, preparatory to evacuating the town, set fire to the military telephone exchange which they had installed in the **Ancien Palais du Premier Président de Normandie** (normally used as the **Hôtel des Sociétés Savantes**, of para. 18) immediately across the narrow Rue St-Lo. The flames spread to the Palais de Justice and burnt the whole of the old part of it. The external walls still stand, with the lucarnes and most of the ornamental stonework, but the interior decoration is a total loss.

Other Monuments and Old Houses. The whole area south and south-east of the Cathedral (bounded by the Rue Grand-Pont, Rue d'Alsace-Lorraine, Rue Molière, Rue des Augustins, Rue de Rampart, Rue Armand Carrel, Quai de Paris) was completely destroyed by fire on 9-13 June 1940. Of the old buildings in this area there still remain the Monument de St-Romain and the Porte Guillaume-Lion (both undamaged), part of the walls of the Anciennes Halles (surrounding the Place de la Haute Vieille Tour) and the shell of the Ancienne Eglise des Augustins. The Fontaine de Lisieux was damaged by fire in 1940 and was completely demolished by a bomb in 1944; a few fragments may still be salvaged.

The area west of this (from the Rue Grand Pont on the east to a point between the Rue St-Eloi and the Rue du Vieux Palais on the west, and generally as far north as the line of the Rue du Petit Salut, Rue aux Ours, Place de la Pucelle, Rue des Pannelets) was burnt on 30 May-3 June 1944. The large nineteenth century buildings on the river front are still standing, though damaged by blast; but the back regions (largely consisting, especially in the western part, of old wooden houses) have been completely wrecked. The church of St-Vincent is a ruin (para. 9), but the Tour St-Andre is not materially damaged. The wooden Maison de Diane de Poitiers is completely destroyed. The Douane and the Bourse have been burnt out, though part of their façades are still standing.

A further area to the north and east of the Palais de Justice roughly consisting of the Rue aux Juifs, Rue du Bec, Rue St-Lo, Rue des Fosses, and part of the Rue des Carmes) has been burnt as a result of the raid on 19 April 1944.

Separating the areas described in the two paras. above, lies the Rue de la Grosse Horloge, which has not suffered in its façades, though the fire has reached to the backs of the houses on either side. A bomb fell into the staircase, immediately beside the Grosse Horloge, but failed to explode. The Grosse Horloge, together with the Fountain and Tower appear to be untouched. The Ancien Hôtel-de-Ville and the fifteenth century wooden façade brought from the Abbaye de St-Amande also survive.

The remainder of the town within the Boulevards has lost individual buildings both by bombing and by fire, but there is not the widespread destruction that there is nearer the river. A considerable number of the old wooden houses therefore

remain, notably the entire Rue Eau-de-Robec (a few separate houses have gone, but not enough to affect the ensemble). The Hotel de Bourgetheroulde shows no damage from the street, but a part of the courtyard has been demolished, including the corner turret, by a direct hit; many of the carved panels are, however, undamaged. The Tour Jeanne d'Arc, the Donjon of the early thirteenth century Castle of Rouen, appears undamaged, apart from a few slates off the roof; it is said to have been used by the Germans as an air-raid shelter and to have had a 6 ft. concrete ceiling inserted into it. The Hôtel d'Aligre, Aître St-Maclou, and the Lycée des Jeunes Filles (a seventeenth century Hotel in the Rue St-Patrice) are untouched. A bomb which struck the corner of the Hôtel de Ville destroyed the greater part of the eighteenth century staircase. The Cloître Ste-Marie (containing the Musée des Antiquités, of para. 16) is undamaged.

ENVIRONS AND NEIGHBOURHOOD OF ROUEN

St-Martin-de-Boscherville. Abbey Church of St-Georges-de-Boscherville. Undamaged.

Jumièges. Ruins of Abbey. Undamaged. (The Germans placed the ruins, and the Chateau in whose grounds they stand, under official protection as a historical monument, and there was no trouble until the last few days of their retreat, when they are said to have parked lorries among the ruins, and to have had gun emplacements nearby, but there is no visible damage from this.)

Ste-Wandrille. Abbey and Ruins. On the night of 8-9 August 1944, two bombs struck the west wing of the abbey (early seventeenth century buildings), destroyed the roof and top-storey and one of the staircases. Apart from a few cracks, no structural damage was caused in any other part of the abbey, but a great number of slates have been dislodged.

Caudebec-en-Caux. Old windows of church removed 1939. In April 1940 the old town was almost completely burnt as a result of German air-bombing. Almost all the old houses were destroyed, but the walls of the Maison des Templiers are standing and have been repaired. Some damage was done to the Church; the hanging boss of the apsidal chapel is supported by a wooden scaffold. Slight damage has been done to the church in 1944, but the total damage to the church is not serious.

Neufchâtel-en-Bray. Town largely destroyed by German bombing in 1940. The entire roof of the Church and of its unfinished tower was burnt and replaced by corrugated iron. The south aisle is in use as a temporary church. A further bomb hit the north choir aisle in August 1944 and demolished three bays. The Hôtel-de-Ville (former Abbey buildings) reported to have been destroyed in 1940.

Mesnières-en-Bray. Chateau. Reported undamaged.

Le Perit-Quevilly. Chapelle-St-Julien. Untouched.

Le Petit-Couronne. Maison de Corneille. Reported undamaged.

Elboeuf. St. Etienne. Old windows apparently removed. Windows broken, façade scarred, tracery of one window gone. St. Jean. Old windows apparently removed. Windows broken, north side of church scarred, one buttress on south damaged.

Le Bec-Hellouin. Abbey ruins. Tower untouched. A part of the eighteenth century buildings (used as Barracks) has lost its roof.

Rennes. Of 18 principal buildings inspected, only the Faculté des Sciences and the Hôtel de Kergu were heavily damaged by German demolitions; the Palais de Justice escaped with only slight blast damage; the Eglise Ste. Germaine and the Palais de Musées were more seriously affected.

Chalons-sur-Marne was heavily damaged as a result of enemy demolitions; the Cathedral of St. Etienne sustained serious concussion damage; the churches of Notre Dame en Vaux and St. Alpin lost their windows, but fortunately all the old glass (thirteenth-sixteenth century) had been removed in advance from all these buildings.

A deposit in the Château Carrouges, containing the stained glass from Beauvais Cathedral and works from the national collections, is intact.

Book Reviews

Architecture Arising, by Howard Robertson. 8vo. 126 pp. + 27 photos. Faber & Faber. 1944. 10s. 6d.

REVIEWED BY H. A. N. BROCKMAN [L.]

After five years during which practically nothing has been added to the architectural scene, nothing, that is, which can be illustrated, discussed and visited, the arrival of this book provides a refreshing stimulus to thoughts of what is going to be produced as soon as the dogs of peace are unleashed. Mr. Howard Robertson, in subjecting to analysis and comment the whole architectural prospect as it appears to him to-day, is, in fact, presenting to us the considered architectural philosophy of one who early gained the facility for looking at things from the viewpoint of "now." The whole book is coloured by his great experience as a practitioner and educator, by his innate commonsense and by the penetrating quality of his observation. What he sees we recognise also, so acute is his instinct for clarifying the thoughts which have been forming in our own minds. This is not to say that his conclusions will be universally shared; every reader will draw his own, but none will fail to be grateful to Mr. Robertson for having turned up the lights.

His plea for a popular architecture will certainly promote disagreement and discussion. Mr. Robertson sees no reason why an artist should not attempt an appeal to the popular taste. He implies also that the public, although knowing little of architecture, knows what it does *not* want and is therefore open to accept an architectural expression which may be new but which must, nevertheless, be possessed of the common touch of humanism. Reason, divorced from puritanical dogmas, is bound to agree with this, but there is also a question of appreciation involved in the wider aspects of his theory which challenges criticism. Whilst maintaining a fierce and justifiable reserve in modern design, the "avant garde" allowed, in the years immediately preceding the war, a definite though restrained intrusion of traditional materials into their structures. With a caustic tolerance the author refers to this trend as the "fashion for introducing into the slick-reinforced-concrete-cum-glass-brick manner of a slab of rubble masonry." Suchlike tendencies he regards rather as signs of weakness than as the welcome forward development which they truly represent. "There is no logic about this," he says, "though there is an aesthetic purpose . . . we have yet to see the staging of a come-back by linen-fold panelling or bevelled mirrors and mahogany." But the development is surely not retrogressive. The introduction of rubble walling in a structural position and for its decorative properties cannot be reasonably regarded as illogical, whilst the use of traditional materials within the (literal) framework of a contemporary design serves to vitalise what admittedly might otherwise lead on towards "rigidity and exclusiveness."

The principles which have been worked out by Le Corbusier and others of the "younger architects," whose importance the author recognises, have laid a foundation from which will spring much "illogicality," the antithesis of the rigidity he fears. This development will surely become swiftly rationalised (as all successful revolutions in art have become rationalised and nationalised in the past), carrying forward "in modern terms" his ideal of "the basic qualities of tradition." These qualities are, nevertheless, abstract as well as physical. The important thing is that compromise can be reached without principles being forsaken. Those who have become thoroughly disciplined in contemporary principles and are consequently unable to approach their problems honestly from any other standpoint have attained a freedom within which they are able to indulge in a wide range of development in architectural aesthetics; architecture as an art is just as much subject to change in direction as the less utilitarian forms of artistic expression, though perhaps more rarely. The reforms contributed by the contemporary movement, being as Mr. Robertson says "of lasting importance," can, if rightly understood, but serve to stimulate a creative imagination.

In any context, however, the author's plea for a fresh infiltration of humanism is welcome. If the public is to enjoy a greater understanding of architecture, then certainly the architect must enjoy a greater understanding of his public. The wholesale popular condemnation of new forms is in itself a healthy reaction and presupposes a latent potentiality for real criticism. The author perceives that "in buildings dedicated to recreation or business, the citizen of England recognises the possibilities of new techniques." Is this really because these buildings are amusement palaces or newspaper offices? Or is it because the owners are the moneyed people who are thus able to exploit the advertising value of experiment? Structural and æsthetic innovations in the classical and mediæval past were the prerogative of State and Church, but they doubtless achieved a significant popular appeal.

One could continue quoting from and discussing literally every page of this stimulating book. The illustrations, with one or two exceptions, are not as exciting as they should be; of the twenty-seven plates eight only are of work from this country, the selection of which could, perhaps, have been more discriminating; time alone will prove this! The production, type and format, whilst in "complete conformity with the authorised economy standards" are better than in most of to-day's publications. As an exposition for public reading there is, perhaps, too much technical discussion, but it would be an unintelligent reader who failed to find the meat between these bones. The book will be enjoyed by the profession for its wisdom and appreciated as a stepping-stone between the architect and those whom he serves.

York Monuments, by Alderman J. B. Morrell. La. 8vo. viii+131 pp. Batsford. 1944. £3 3s.

REVIEWED BY MRS. KATHERINE ESDAILE

This is a really important book, not least because of its scope, which covers memorials from 1255 to the Boer War, with no hampering date to cut out everything after 1714 as unworthy of notice, as is the case of the R.H.M.C. volumes. It is literally the first time since the eighteenth century, and then it was Drake's *Eboracum* (1736) that led the way that an attempt has been made to cover the whole field of one art as shown in a single city, and it is a fact that the non-mediæval works are the most interesting. Mediæval monuments tend to be much alike; one has the sensation that they might be in any cathedral; it is otherwise with the later works at York. To begin with, there is the unique series of mitred archbishops of post-Restoration date, and do not let us forget in this connection that the latest of the great brasses of England represents a mitred York Archbishop Harsnett, (d. 1631); there is the astonishing link between Gibbons and the York sculptor Samuel Carpenter (whom Drake himself employed on two lost monuments at Leeds), who was a friend of Gibbons' York master Ety, and whose cherubs (on Plates XXV and XLII) might be taken for Gibbons himself; there is the interesting group of works by three generations of the Fishers of York; there are the two fine works by Nicholas Stone to contrast with the work of local alabasterers also in the Minster. And the inclusion of works in the parish churches of York is of unique value; we see at once that taste was not peculiar to the Chapter, but that the parishioners of York probably, their local masons and alabasterers certainly, had due appreciation of good art.

There is only one work of a foreign sculptor in the whole long series, and that is due to the accident of Lord Burlington's presence in York, for Guelfi was his protégé, and Lord Burlington, to whom we owe the York Assembly Rooms, was a power in York. It is English art that we see here, in every form, from the elaborate monument of Archbishop Sharp (d. 1714) by Wren's favourite sculptor, Francis Bird, to the little pretty-pretty tablet signed by the nineteenth-century Fishers—grandsons of the architect of the Christ of the Minster (p. 82) and the many tablets and cartouches in the lesser parish churches, the inclusion of which is so valuable a feature of the book. And the nineteenth-century memorials are often really interesting. It seems clear that Matthew Noble must have visited York Minster when his Archbishop Harcourt (pl. LXXXIV) was commissioned, since the base reproduces (with a little additional ornament) the tomb of Archbishop Sewell de Bovill (1258), a gracious linking of seven centuries. And it is curious, after the specimens of later nineteenth-century "Gothic," with what relief the eye rests on Bodley's Memorial for the Boer War on the last plate;

it is unfair to call it imitative, for it is a work of art in a medium which is clearly the artist's natural form of expression.

But we must not forget the text, which groups the monuments by periods and links one with another in a clear and scholarly way; comparisons, as Alderman Morrell makes them, are anything but odious, and are often instructive and far from obvious. It was a keen eye indeed that perceived the identity of the tablet below Lady Elizabeth Stapleton (1683) at Snaith (Plate XXV) and the reproduction of it as an entity on Plate XLII—the former signed by Samuel Carpenter, as this reviewer discovered when visiting the church with Mr. Morrell himself.

If books like this could be produced on all the cathedral towns beginning with Canterbury and Gloucester, we should be in a better position to judge of English art, and to rebut the charge so often brought against this country that the English is not an artistic nation. It is hard to overstate our debt to Mr. Morrell and to his publishers for this remarkable work, the publication of which in war-time is of especial significance. Any architect to whom it falls to design a War Memorial will be well advised to study it with care; he can hardly fail to get new inspiration by so doing.

Henry Yevele, c. 1320 to 1400. The Life of an English Architect

By John H. Harvey. x x 86 pp. London: B. T. Batsford, Ltd. 1944. 15s. net.

REVIEWED BY PROF. DOUGLAS KNOOP [Hon. A.]

This book is a tribute paid by Mr. Harvey to the memory of Henry Yevele for the part he played in the development of English architecture during the second half of the fourteenth century. For many years Yevele's prominence as a mason has been recognised; the available information about him has steadily increased, and it has gradually become possible to trace his career in some detail. Whether there is enough material for a full-length biography is another question.

For his facts, Mr. Harvey relies very largely on the work of previous writers, to whom he makes generous acknowledgments. When he sticks to what he calls "the firm ground of fact," I have nothing but praise for his work, apart from an objection to his treating as facts, without qualification, probabilities, or even possibilities. It is when he leaves "the firm ground of fact" and ascends what he calls "the solid scaffolding of rational conjecture" that I find myself in complete disagreement with him.

Apart from the reference in his will to his parents as Roger and Marion, the earliest fact known about Yevele is that he was a fairly prominent mason-hewer in London in 1356, when he was probably a man in the middle thirties. Thus, until he attained the age of about 35, there is not one single fact known about Yevele. Yet Mr. Harvey writes a chapter of some 6,000 words on Yevele's "Early life and surrounding influences." It necessarily consists of a series of conjectures, e.g., that he was born about 1320, at or near Yeaveley in Derbyshire; that his father was a certain Roger de Zeveley who lived at Uttoxeter in Staffordshire (seven miles from Yeaveley) and paid 18d. to the subsidy of 1327; that the father was a mason who worked at Tutbury or some other monastery in the area; that Henry learnt his trade from his father and at the same time attended a monastic school where he acquired a knowledge of French, Latin and geometry; that at Tutbury, famous for its alabaster quarries, he became acquainted with the art of tomb-carving; that he learnt much from visits to neighbouring buildings, such as Tutbury Priory Church, Croxden Abbey and Lichfield Cathedral; that in the 1340's he travelled in the West Country and possibly in France. Though each conjecture in itself may be not unreasonable, the collective effect of piling one upon another is to create a superstructure that appears top-heavy.

The very attractive but highly imaginative picture painted by Mr. Harvey can be tested in two ways: (i) Does it explain Yevele's position of some standing as a mason-hewer in London in 1356? I suggest that it does not. (ii) Does it harmonise with what is known of the authentic early careers of medieval mason-architects, such as Richard Beke, master mason at Canterbury Cathedral 1335-58, and Christopher Horner, master mason at York Minster 1505-23? Again, I suggest that it does not. I feel that Mr. Harvey provides Yevele with the kind of training and environment which twentieth-century experience would suggest was best suited for a future architect, and that he overlooks the fact that Yevele, when first discovered in 1356 at the age of about 35, was a mason-hewer, and had presumably received an appropriate training for that trade. If he had learnt his craft in London under a mason of repute, he might well have acquired skill as a hewer, some first-hand knowledge of planning and designing, and such standing in his trade as would have secured his selection in 1356 as a representative of the mason-hewers.

During Yevele's well-documented career from 1356 to 1400, Mr. Harvey constantly sees him as architect rather than as mason. Whenever it is on record that Yevele was consulted, or his advice sought, Mr. Harvey immediately pictures him as the designer of the building in question. There is evidence to show that on one or two occasions late in his career Yevele supplied plans or models for certain mason-contractors, but that is no reason for assuming that he did so where the works concerned were in charge of especially appointed master masons. Nor do I feel that a very large private architectural practice, such as Mr. Harvey assumes that Yevele enjoyed, can be reconciled with the three salaried posts which he held simultaneously for many years, viz., those of King's Master Mason, Master Mason at Westminster Abbey and Warden of London Bridge, the last a purely administrative post. As each post carried a more or less substantial salary, the presumption is that his employers saw to it that he had relatively little spare time for private practice.

I do not feel qualified to express an opinion on Chapter V, where Mr. Harvey turns to a consideration of the numerous works which in previous chapters he has ascribed to Yevele, on stylistic or other grounds, though occasionally the works considered are ascribed to Yevele's school or Yevele's pupils. Though Yevele's direct participation in the development of English architecture seems to me to be overstressed by Mr. Harvey, nevertheless the development is deserving of close study. In such study the reader will be greatly assisted by the fine illustrations with which the book is adorned.

Whilst commending the book to readers of the JOURNAL as a study of fourteenth-century English architecture, I have to warn them that it must not be accepted as a reliable picture of the life of a fourteenth-century mason-architect. As biography, it belongs to the category known as romantic biography.

HOUSING and PLANNING

Housing and Community Planning: 4th and final report of a sub-committee of the Advisory Committee on Reconstruction of the Canadian Government. 8vo. 340 pp. Ottawa. 1944.

The terms of reference of the Committee were: "To review the existing legislation and administrative organization relating to housing and community planning, both urban and rural, throughout Canada, and to report regarding such changes in legislation or modification of organization and procedure as may be necessary to ensure the most effective implementation of what the Sub committee considers to be an adequate housing programme for Canada during the years immediately following the war."

The report is in three sections: the first is a summary of facts in which it is shown that the immense Canadian re-housing programme for the replacing of sub-standard and small dwellings requires the provision of 125,000 dwellings in the major cities and 50,000 more in the smaller cities and towns. To this is added another 2,500 dwellings which need external and plumbing repairs. 55,000 dwellings are needed in the larger cities to relieve overcrowding and 20,000 in the smaller towns. Their problem, as can be seen, is immense, taking into consideration the newness of most Canadian cities and the comparative smallness of their population. Other major topics dealt with in Section A—the main report, are house planning and house sizes, incomes, rentals and costs of ownership, town planning—an important chapter of 20 pp.: farm housing, and the methods of reducing housing costs.

The second section brings together descriptive material on a number of topics which include notes on rent control, public utility and co-operative housing, on the Scott and Uthwatt Reports and on prefabrication and building technique, the last a summary of 5 pp. The third section is a statistical appendix.

Country Towns in the Future England, being a report of the Country Towns' Conference of the Town and Country Planning Association, edited by Stanley Baron. 8vo. 140 pp. Faber & Faber. 1944. 8s. 6d.

This is a report of a T.C.P.A. conference held in October 1943 to consider what part country towns should play in national planning policy and whether there is ground for united action in representations on planning policy to the government. At the conclusion of the conference four resolutions were passed, setting up committees to consider the matter further and giving general support to a statement by the Executive Committee urging the Government to adopt the recommendations of the Barlow Report for the decentralisation of industry, business and population from congested urban areas.

After "the statement" the major contributions to the conference were on four main themes: Country Towns, their potentialities and needs; Industrial Estates in country towns; Social Amenities and the

arts in country towns; and on the legislation required to bring an effective policy into being. The report provides the most stimulating and complete body of opinion on this ancient and deep-rooted important element of the British social set-up—the country town—that has yet been published. At the time when the conference was held it had an immediately stimulating effect which the report can help to maintain at a time when practically all planners in Britain are feeling a bit down in the dumps.

Home Again: Domestic Architecture for the Normal Australian, by J. D. Moore [A.]. 8vo. 78 pp. Ure Smith, Sydney. 1944. 7s. 6d.

Housing: 1. The Problem, 2. Technical Answers, 3. Administration, 4. The Social Answer. **The Land:** 1. Markets, 2. Conditions, 3. Amenities, 4. Ways and Means. 8vo. Australian Dept. of Post-War Reconstruction. 1944. Canberra. No price.

Australian architects are faced with the same problems that we know in Britain of making ordinary members of the public understand the architect's contribution to the quality of living through their specialised abilities as the designers of houses. In this book, intended for "the normal Australian," Mr. J. D. Moore, F.R.A.I.A. [A.], talks very simply about Australia and what has made it what it is, its natural and man-made conditions, the life of normal Australians and their houses. He shows what is good in the houses they know and what is often so bad as to be as awful as anything in house design anywhere, and then illustrates and describes 14 simple examples of good design for people of ordinary incomes and ordinary tastes. The book must be useful and is interesting to us as an example of original and vigorous architectural propaganda.

The eight little Australian Government pamphlets are very straightforward hard-hitting attempts from the centre to wake the Australian people up to their responsibilities and opportunities. Their theme is represented at the start of the housing series by the sentence, "So much is being talked about the housing problem, and so many people are offering their own contradictory solutions of it, that it is hard for the ordinary citizen to see the wood for the trees"; and, at the start of the planning series, by "Never in history have the primary needs of the world had better chances than they have to-day to be satisfied." Both series are almost entirely concerned to present facts as the basis for group discussions and they do this excellently.

Good Shelter for Everyone. 8vo. 24 pp. Congress of Industrial Organisations, Washington. 1944. 10 c.

Most people know of the vigorous U.S. trades union body, the C.I.O. This is a lively popular pamphlet produced by their Department of Research and Education in a series called *Facts for Action*, in which they have charted a programme for American workers in all fields of their social and economic life. The theme is "The possibilities before us" developed as a call to the American workers to understand what they can have if they demand it and "marshal the forces of organised labour in support of the fundamental principles embodied in this programme." The pamphlet is simply presented, better in this respect than most of the similar British pseudo-political housing pamphlets.

Homes of To-morrow. A Report by the Worthing Council of Social Service. 4to. 62 pp. 1944. 2s. 6d.

There are Councils of Social Service in many places and they fulfil a great variety of tasks. This Worthing Council is the first one to publish a quite considerable study of housing conditions and solutions in its area. The job is worth doing and here has been done well.

The first part describes the inter-war period in which 768 houses were built by the Corporation without getting near a solution of the working-class housing problem. General Vaughan, chairman of the Housing Committee in 1934, deplored the failure of Council and private enterprise to meet the needs of poorer people. The Council had done all they could, but "nothing is being done," he said, "by private enterprise for working-class people." The same picture was being revealed everywhere.

The present report seems to be directed largely at the local authority to stimulate them to tackle the problem after the war.

Worthing is not a large place, but even now there is a Borough Council waiting list of between four and five hundred families mostly requiring houses below the level of cost that private enterprise has shown itself capable of satisfying.

The main body of the report is a statement of "what we would like to see" in size, plan, equipment, design and layout, social amenities

and neighbourhood elements. The Council call for a 950 sq. ft. house and otherwise express similar demands to those voiced in official and R.I.B.A. reports. There are good short discussions on prefabrication and temporary housing; on differential rent systems and indeed on almost every aspect of housing from equipment to major items of economic policy.

The Report as a whole and in detail is an admirable piece of work, valuable in a special way as coming from a middle-class and sometimes reputedly snobbish community. The social conscience and the un-snobbish common sense shown in every paragraph of this report is a model for any town.

MATERIALS and CONSTRUCTION

A First Course in Science for Building Students, by Staddon and McPherson. 8vo. 240 pp. University Tutorial Press. 1944. 5s.

Mr. Staddon is vice-principal and head of the science department of the N. Gloucestershire Technical College and Mr. McPherson is senior lecturer in physics at the same place. Their book is intended for students taking the first-year course for the National Certificate in Building, who, it is suggested, have suffered in the past from insufficient training in the scientific bases of building so that the time lag in the advance from purely traditional building persists.

The chapters deal in succession with heat and temperature—the expansion and contraction of materials, changes of state due to heat changes, conduction convection and radiation.

Elements, mixtures, compounds; the chemistry of the air and corrosion; the chemistry of water.

Force, the measurement of force, elasticity and moments. Density, specific gravity, pressure in liquids and gases.

Lime stones and lime, mortars, cement and concrete.

Chemical equations and calculations.

The structure of matter, porosity and voids.

Metals, plastics and finally electricity.

Throughout great emphasis is laid on experiment and the work is fully and well illustrated.

Building Construction, Parts II and III, by W. B. McKay. ob. fo. 136 and 148 pp. Longmans. 1944. 9s. each volume.

The first volume of McKay's *Building Construction* was published in 1938 and immediately became recognised as one of the best books for students. The author, who is lecturer in building construction in Manchester University and head of the department of building in the Manchester College of Technology, has been able to present the elements of building technique with a background of first-class teaching experience, so that this is indeed a model school book and one that is certain to be in great demand.

The two new volumes carry the work beyond the first elements. Volume two has chapters on Brickwork, Drainage, Masonry and mild steel roof trusses. Volume three on Carpentry, joinery and roof coverings. In every part the information is clearly presented with admirable drawings of model clarity.

Each section deals with its subject from the first point at which a student's interest can be captured or his intelligence stimulated. In the chapters on materials there are, for instance, notes on the natural materials, their processing or manufacture before details of their building use are dealt with. In each section there is a brief statement of scientific properties and the techniques of construction or use of materials recommended are always up-to-date.

Heating and Ventilating: embracing Hot Water Supply and Air Treatment, by L. J. Overton. Edited by F. Herod. 5th edn. 8vo. viii + 340 pp. Sutherland Publishing Co. 1944. 16s.

This is a new edition, with considerable revisions and additions to the previous edition of 1944, of a good general teaching text-book. Normal practice is well described and is preceded by chapters on the principles of heating and the evolution of heating. The latter describes Victorian and Edwardian heating equipment and is a useful guide for people who have to unravel the systems and piping ducts in old houses.

The main chapters deal with low pressure hot water heating by gravity and forced circulation; panel heating, steam and vapour heating; floor heating, particularly as applied to sanatoria; unit heaters; the plenum system, dust and fume exhaustion; steam cooking apparatus and district heating. The work includes many useful tables of properties, K values, etc., and is fully illustrated by the almost incredibly slap-dash drawings which pass as "good enough" in too many technical hand-books.

Architectural Hygiene: or Sanitary Science as applied to Buildings, by Sir Banister Fletcher and Major H. Phillips Fletcher. 10th ed. 8vo. 371 pp. Pitman. 1944. 18s.

The eighth edition of this standard text-book includes some revisions on the 1939 edition. The introduction states that the section on Sanitary Legislation which was entirely re-written for the last edition has been further extended. The Sanitary Construction chapter has been revised and enlarged and additional space given to the treatment of damp. In the ventilation section there are additional notes on factory ventilation and there are details of the air-conditioning of two large hotels.

The Elements of Building Mathematics, by T. H. Fallows. 8vo. vi + 165 pp. Dent. 1944. 3s. 3d.

A straightforward elementary book for building students and architectural students of the not rare kind who are led to the profession by artistic rather than scientific interests. It starts from the simplest problems of h.c.f. and l.c.m. and goes patiently and explicitly as far as simple quadratic equations and the measurement of areas and volumes as a part of surveying technique.

Revised British Standard Specification for Conversion Factors and Tables. (B.S. No. 350. 1944). 3s. 6d.

A revised and considerably enlarged edition of B.S. 350 has been issued, comprising linear, square and cubic measures, measures of capacity, weights, speeds, stresses and pressures, weight per unit length, densities, concentrations, forces, moments, moments of inertia, work, heat, energy and power. There are, also, temperature conversion charts and tables, and wire and sheet metal gauge sizes expressed in decimals of an inch and in millimetres. The book is divided into five parts. Part 1 contains basic tables of units and definitions affecting conversions. Part 2 consists of conversion factors presented in the form of 27 tables. Part 3 contains multiple from 1 to 3 of 119 conversion factors. In the 32 tables included in Part 4 the range is usually from 1-100 units, whilst the 20 tables in common use included in Part 5 cover, in general, a range of 1-1,000 units.

World Timbers, Vol. I. Loose-leaf sm. 8vo. Timber Development Association. 1944.

This is a loose-leaf booklet of technical information on over fifty timbers. It is an intelligently compiled and useful work of reference. The following information is given: Botanical name, other names, distribution, "the tree"—size and character; the timber, seasoning, strength (in general and not mathematical terms), durability, working qualities, uses, supplies. The sheets are arranged alphabetically and there is an excellent index to all names and variant names.

A limited number only are available, at the price of five shillings, to qualified applicants from the T.D.A., 75 Cannon Street.

Report on "Prefabrication" by the Building Industries National Council. 8vo. 6 pp. 1944. Issued free.

The Building Industries National Council has published a statement of the minimum considerations to be taken into account when discussing the subject of "prefabrication." Stress is laid on the need to secure the stability of the building industry as part of a balanced national economy with a minimum of dislocation during the period of immediate post-war emergency.

Volumes and speeds of building greater than ever before will be required for many years, and at first there will be special difficulties such as shortage of manpower. In this connection the Government claim that the limited building capacity can be supplemented only by the use of special forms of structural prefabrication, e.g., the steel bungalow. The Report, while recognising that special measures must be adopted in this emergency, points out the dangers of basing post-war building on the sole criterion of speed alone, and of the encroachment of sub-standard prefabricated types in the sphere of traditional building.

The building manpower of the country is a national asset, with a long tradition of development and involving systems of apprenticeship and standards of security. In the interests of the national economy, any emergency measure, such as the adoption of prefabrication, should interfere as little as possible with the immediate employment of building crafts and with their position in the national economy hereafter.

For the first year or so before a reasonable amount of demobilisation takes place, traditional building methods may not satisfy the early post-war requirements. But the need for substitutes must be viewed

in relation to the ability of traditional building to satisfy general requirements. The Report outlines a scheme which in making:

"The maximum use of standardisation and providing the benefits of mass-produced components and planning facilities to as wide a range of operations as possible, would add to the capacity of the traditional industry."

"It is just as important to reach higher outputs by new methods as it is to seek entirely new methods."

The Industry welcomes all forms of technical progress, and provided there are adequate safeguards, the public interest should be served. It is recommended that these considerations should be converted into a precise plan in which the knowledge and experience of the Industry are joined.

Bricklayers' Repair Work, by W. Frost. 8vo. 95 pp. Technical Press. 1944. 4s. 6d.

There will be plenty of brickwork repairing to be done to blitzed houses and many craftsmen to train after the war. This book for bricklayers is as direct and simple and as well illustrated as good craftsmen and teachers could desire.

Review of Periodicals

1944-45—I (concluded)

SANITARY SCIENCE AND EQUIPMENT, *cont.*

HEATING AND VENTILATING ENGINEER AND JNL. OF AIR CONDITIONING, 1944 Aug., pp. 45-52;

JNL., INSTN. HEATING AND VENTILATING ENGINEERS, July-Aug., pp. 90-127;

Heating: past, present and future. Paper by J. R. Kell, M.I.H.V.E. Comparative summary of methods. Illusd. Bibliography and discussion.

BYGGMÄSTAREN (Stockholm), 1944 No. 14, pp. 262-6;

Heating and ventilation installations. Article by K. G. Eklund, civil engineer.

HEATING AND VENTILATING ENGINEER AND JNL. OF AIR CONDITIONING, 1944 July, pp. 3-4;

Work on the employment of solar energy in Soviet Asia. Article by V. A. Fedoseyev.

KEYSTONE (A.B.T.), 1944 Sept., pp. 5-6;

Heat transmission (thermal conductivity of materials, K): table and note compiled by Moorgate branch of A.B.T. from various sources.

JNL., INSTITUTION OF HEATING AND VENTILATING ENGINEERS, 1944 May-June, pp. 42-74;

Zonal heat distribution as a step towards district heating: paper by J. L. Musgrave, M.Inst.C.E., and discussion. Incl. notes on house insulation.

KEYSTONE (A.B.T.), 1944 Sept., pp. 9-10;

District heating: short article by J. C. Knight, A.M.I.H.V.E.

ARCHITECTURAL DESIGN AND CONSTRUCTION, 1944 Sept., pp. 206-9;

District heating: a survey of some recent publications and papers by Dr. O. Faber, Mr. D. H. V. Smith and Bristol report.

HEATING AND VENTILATING ENGINEER AND JNL. OF AIR CONDITIONING, 1944 Aug., pp. 65-6;

District heating costs. Letter from D. V. H. Smith.

ARCHITECTURAL FORUM, 1944 Aug., pp. 12-4;

Dehumidifying: notes on remedies for mildew, dampness and discomfort caused by high humidity.

PROOFING

AMERICAN CITY, 1944 May, pp. 72-3;

Fire protection of wood—"Albi-Firepel's" fire-retarding coating, approved by N. York City Board of Standards.

ARKITEKT (Istanbul), 1944 No. 3, pp. 93-6;

Means of earthquake-resisting construction. Article by Prof. A. Türkmen. Illusd. maps.

ARCHITECTURAL RECORD, 1944 Mar., pp. 102-9;

Acoustical materials: noise reduction. Time-Saver Standards. Rule-of-thumb coefficients of noise reduction, table of requirements for room types, lists of materials alphabetically by trade names with characteristics. Ceiling and floor structures acoustical treatment.

ARCHITECTURAL RECORD, 1944 July, pp. 117-8;

Acoustical planning for motion-picture auditorium. Time-saver Standard. Also corrected version of T.S. Standard on Acoustical materials, publ. in March.

JNL. R.I.B.A., 1944 Aug., pp. 253-60;

Heat insulation in domestic buildings. Detailed technical article by S. F. Newcombe.

A.R.P., WAR DAMAGE (including REPAIR)

ARKHITEKTURA S.S.S.R. (Moscow), 1943 No. 4, pp. 37-41:

A.R.P. Bomb-resisting shelters. Synopsis of designs.

ARCHITECTURAL REVIEW, 1944 Sept., pp. 62-70:

Camouflage; aesthetics and technique. Articles by Hugh Casson and Julian Trevelyan brilliantly illustrated by the authors.

BUILDER, 1944 Oct. 6, pp. 273-5:

War damage repairs in London. Statement by Sir M. T. Eve, Chief of Staff to Lord Woolton for housing war repairs in London.

ARCHITECTS' JOURNAL, 1944 Sept. 28, pp. 235-8:

"Bayeux had the break." Article by E. Watkins on war damage in Normandy. Illusd.

ARCHITECT AND BUILDING NEWS, 1944 July 28, pp. 62-4:

War damage in Central Italy: report. Also map of Siena by H. V. M. Roberts.

ARCHITECTURAL REVIEW, 1944 Sept., pp. lii-lv:

War Damage in Central Italy: official report. With note on San Gimignano, including THE TIMES letter, July 26.

JNL., ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1944 Sept., pp. 287-9:

Monuments of Central Italy: 2nd Rept. from Civil Affairs Dept. of War Office describing war damage and repair.

JNL., ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1944 July, pp. 231-3:

The Church of Monteoliveto, Naples. Work of restoration by the Civil Affairs Department of the War Office. Illusd.

ARKHITEKTURA S.S.S.R. (Moscow), 1943 No. 4:

Leningrad during the war. Article by Arkin.

ARKHITEKTURA S.S.S.R. (Moscow), 1944 No. 6, pp. 2-11:

Stalingrad: its plan, history and ruin. Articles by N. Polakov and Pozharski.

BUILDER, 1944 Aug. 11, p. 110:

Stalingrad of tomorrow. Article by I. Pomelov.

JNL., ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1944 July, pp. 219-25:

War Damage Act and architects. Paper to R.I.B.A. by Sir Malcolm Trustram Eve, K.C., chairman, W.D. Commission. Describes operation of new scheme ROD.1.

TOPOGRAPHY
ARCHITECTURAL REVIEW, 1944 Oct.:

South Africa. Special number. The natural scene, social and industrial background. Architecture, historical and contemporary. Housing. Illustrating recent schools and university buildings, dental school and hospital, Witwatersrand Technical Coll., club house bldg., Durban, cinema, flats, private houses.

PLANNING, RECONSTRUCTION (Physical and Sociological)

ENGINEERING NEWS-RECORD, 1944 June 15, pp. 102-10:

"Britain looks beyond the battle." Article by Editor Bowman on Reconstruction plans, rebuilding of blitzed buildings, etc.: commentary on governmental set-up. Illusd.

TOWN AND COUNTRY PLANNING

ARCHITECTURAL FORUM, 1944 Aug., pp. 79-83:

"Planning with you." Radio publicity for planning at Syracuse, N.Y.

ARCHITECT AND BUILDING NEWS, 1944 July 28, pp. 52-4; Aug. 4:

The Government's proposals on planning. Critical review of Town and Country Planning Bill, etc., by Sir Gwilym Gibbon.

TOWN AND COUNTRY PLANNING, 1944 Summer, pp. 76-81:

Town and Country Planning Association's policy in particular relation to the T.P. Bill (1944) and the White Paper.

ARCHITECTS' JOURNAL, 1944 Aug. 17, pp. 121-4:

Land values: article by H. J. Crone.

ARCHITECTS' JOURNAL, 1944 Sept. 7, pp. 185-6;

JOURNAL, CHARTERED SURVEYORS' INSTITUTION, 1944 Aug., (Trans.) pp. 2-16; Oct., (Trans.) pp. 18-32:

The Town and Country Planning Bill and White Paper on Control of land use: paper to C.S.I. by Sir William Jowitt, Minister without Portfolio for Reconstruction. Also discussion, by J. D. Trustram Eve, and others.

ARCHITECT AND BUILDING NEWS, 1944 Oct. 6, pp. 15-16;

JNL., CHARTERED SURVEYORS' INSTITUTION, 1944 Oct., pp. 151-9:

Town and Country Planning Bill. Memo. by Chartered Surveyors' Instn.

JNL., TOWN PLANNING INSTITUTE, 1944 July-Aug., pp. 185-8:

Some thoughts on information needed for planning. Extracts from paper by R. H. Mattocks on subjects of preliminary survey.

PENCIL POINTS, 1944 June, pp. 87-8, 99-101:

Measuring urban population densities. First part of study by Citizens' Housing Council of N. York.

REGIONAL PLANNING

PENCIL POINTS, 1944 July, pp. 83-:

The British architect and London. Article by R. Walker on London planning.

ARCHITECTS' JOURNAL, 1944 Aug. 10, pp. 99-114, xxx:

London plans: comparative analysis of L.C.C., L.R.R.C., Mars and R.A. plans by F. C. Kent and F. J. Samuely. One of the most detailed and constructive summaries yet made. Illusd. tables and diagrams.

ARCHITECTURAL REVIEW, 1944 Sept., pp. 77-82:

County of London plan. Critical articles by five distinguished Americans: Jacob Crane, Director Urban Studies, N.H.A.; F. P. Clark, Director N. York Regional Plan Assn.; Clarence Stein; Prof. J. M. Gaus, Prof. Political Science, Univ. Wisconsin; and Catherine Bauer, with concluding summing-up by ARCH. REV. Editor.

ARCHITECTS' JOURNAL, 1944 Sept. 28, pp. 229-34; Oct. 19, p. 297:

County of London plan. Analysis by Elizabeth McAllister of comments on plan received by L.C.C. from London Boroughs.

BUILDER, 1944 Aug. 25, pp. 157-8:

Rural planning in Russia: rebuilding the Soviet village. Article by G. Hanna.

TOWN PLANNING, including REPLANNING

TOWN AND COUNTRY PLANNING, 1944 Spring, pp. 13-5:

Planning and housing in Vienna: a summary of its effect after the last war by J. Schreiner.

JNL., AMERICAN SOCIETY OF ARCHL. HISTORIANS, 1944 Jan., pp. 4-17:

Glimpses of democracy in mediaeval urbanism. Article by Carol Aronovici. Social and political interpretation of the mediaeval plan in France and England. Bibliog.

JNL., AMERICAN SOCIETY OF ARCHL. HISTORIANS, 1944 Jan., pp. 22-33:

Russian city planning of the 18th and early 19th centuries. Article by H. Blumenfeld. Illusd.

JNL., AMERICAN SOCIETY OF ARCHL. HISTORIANS, 1944 Jan., pp. 18-21:

Copenhagen, 1600-1700: an outstanding city planning achievement. Article by Frederick R. Stevenson. Illusd.

TOWN AND COUNTRY PLANNING, 1944 Spring, pp. 16-22; Summer, pp. 62-73:

Liverpool, Manchester, Leeds, Nottingham, Leicester, Edinburgh, Plymouth and Birmingham post-war plans analysed by R. L. Reiss, with an epilogue on density comparing figures for various towns.

ARCHITECT AND BUILDING NEWS, 1944 Aug. 11, pp. 81-6;

ARCHITECTS' JOURNAL, Aug. 6, pp. 94-6;

BUILDER, July 28;

COUNTRY LIFE, Aug. 4, pp. 204-5;

NATIONAL BUILDER, Aug.:

City of London plan. Report abstracted and reviewed.

ARCHITECTS' JOURNAL, 1944 Oct. 19, p. 297:

BUILDER, Sept. 29, pp. 259-60:

Replanning the City of London. Talk at Housing Centre by F. J. Forty, C.E. of London Engineer.

JNL., INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, 1944 June 6; July 4, pp. 496-502:

A plan for Plymouth. Reviewed in June 6 No. by L. Roseveare, Past-President T.P.I., and further described in July 4 No. by J. Paton Watson, City Engineer.

ARCHITECTURAL FORUM, 1944 July, pp. 81-4;

JNL., TOWN PLANNING INSTITUTE, July-Aug., pp. 179-82;

OFFICIAL ARCHITECT, July:

Plymouth plan: further reviews. (O.A.) with introd. by Viscount Astor, Lord Mayor.

ARKHITEKTURA S.S.S.R. (Moscow), 1943 No. 4, pp. 5-10:

Reconstruction plan for Istra by A. Schusev. Incls. designs for tourists' club.

JNL., ROYAL INSTITUTE OF BRITISH ARCHITECTS, 1944 Sept., pp. 289-90:

Moscow plans. Report by A. Werth of discussion with Pronin, Mayor.

JNL., ROYAL ARCHITECTURAL INSTITUTE OF CANADA, 1944 July, pp. 147-151:

Montreal. Survey and project for replanning. Thesis for Illinois Inst. Tech., Chicago, by A. C. Lewis.

ARCHITECTS' JOURNAL, 1944 Sept. 14, pp. 193-6;

JNL., ROYAL ARCHL. INSTITUTE OF CANADA, June, pp. 111-134:

Toronto master plan. Special No. edited by Anthony Adamson and E. G. Faludi. Planners' history of Toronto; geography; need for planning; basic studies; procedure and legislation needed; maps. Fully illusd. with large folded master plan.

PENCIL POINTS, 1944 July, pp. 73-8:

"Post-war question mark." Review by Talbot Hamlin of N. York City Planning Commission Exhibition.

ARCHITECTURAL FORUM, July, pp. 65-76 :
 "Aluminium City," Pittsburg, by Walter Gropius and Marcel Breuer. War industrial township for 240 tenants, with community building. Detailed description and tenants' opinion survey. Terrace houses, brick and red cedar.
 "Riverside terrace" housing, Paterson, N.J., by Stephens, Kelly and Gruzen.

JNL. R.I.B.A., 1944 Aug., pp. 247-52 :
 The surroundings of St. Paul's and a National Memorial. Paper to Ecclesiological Society by W. H. Ansell [P.P.].

ARCHITECTS' JOURNAL, 1944 Oct. 5, pp. 247-9 :
 Westminster as it might have been. Article by Brook Kitchin on 1832 plan for area south of St. James's Park. Illusd.

JNL., AMERICAN SOCIETY OF ARCHT. HISTORIANS, 1944 Jan., pp. 34-40 :
 Problems in restoring the [L'Enfant] plan of Washington. Article by H. P. Caemmerer.

S. AFRICAN ARCHITECTURAL RECORD, 1944 July, pp. 177-81 :
 Sociology and town planning. Paper by L. Silberman.

AMERICAN CITY, 1944 Aug., p. 69 :
 Artificial hills for level towns. Note with illusn. by E. A. Eichstedt.

ARCHITECTS' JOURNAL, 1944 Aug. 31, pp. 167-8 :
 The future of the country town : lecture by R. L. Reiss.

TOWN AND COUNTRY PLANNING, 1944 Spring, pp. 22-5 :
 A village becomes a town. Development plan for Rainhill, Lancs., from 5,000 to 20,000 popln. by W. Garbutt, Surveyor and Plg. Officer.

JNL., TOWN PLANNING INSTITUTE, 1944 July-Aug., pp. 171-9 :
 Planning and industry : some obstacles to mobility. Paper by Prof. P. Sargent Florence, with particular reference to Birmingham district.

ZONES, including RESIDENTIAL AREAS

TOWN AND COUNTRY PLANNING, 1944 Spring, pp. 28-9 :
 The place of the pub in the community. Article by Dr. J. J. Mallon.

ARCHITECTURA S.S.S.R., 1944 No. 5, pp. 23-9 :
 Village plans. General article, with many illustns. of community and garden city plans from England and U.S.A. and of house types and layouts.

ARCHITECTS' JOURNAL, 1944 Aug. 3, pp. 85-7 ; Nov. 9, p. 346 :
 Neighbourhood plans for Birkenhead suburb. Rival schemes by B. Robinson, Boro' Engineer, and Sir Ch. Reilly compared. Illusd.

OFFICIAL ARCHITECT, 1944 Sept., pp. 412-21 :
 Three Birmingham projects. H. J. Manzoni, City Engineer, D. H. Davies [F.], Housing Archt. Shard End estate lay-out for 2,500 dwellings and industrial bldgs. etc. : prepared by B'ham and Five Counties Archt. Assn. B'ham type experimental steel-frame prefab. house : plans, details. High-density 3-storey maisonettes for density of 30 to acre.

ARCHITECT AND BUILDING NEWS, 1944 Sept. 29, pp. 195-8 :
 Shard End project, suburban estate, Birmingham. 2,400 houses, with industry, business, shopping, etc. centres. Plans, views.

PENCIL POINTS, 1944 June, pp. 66-70 :
 "Stuyvesant six" : a redevelopment study by M. Breuer of Central N. York area housing as variant on low-standard over-crowded scheme proposed by Metropolitan Life Assurance Co. Details neighbour planning and of tall flats. Also redevelopment area in Boston, by Breuer.

TOWN AND COUNTRY PLANNING, 1944 Spring, pp. 6-12 :
 Social science and town planning. Article by F. J. Osborn, mainly reviewing Liepmann's "Journey to Work," with notes on density.

TRANSPORT PLANNING

ENGINEERING NEWS-RECORD, 1944 May 4, pp. 104-5 :
 Multiple level road crossings. Illusd. note on bridgehead fly-overs, Portland, Oregon.

AMERICAN CITY, 1944 Aug., pp. 51-2, 81-3 ; Sept. 1, pp. 78-81 :
 Will cities come of air age ? Article by A. Mayer. Airport provision and location.

GARDENS

COUNTRY LIFE, Aug. 18, pp. 286-7 :
 In a Persian garden. Article by W. J. Makin. Illusd.

JNL., INSTN. OF MUNICIPAL AND COUNTY ENGINEERS, 1944 Oct. 3, pp. 86-7 :
 Examples of modern landscape design. Abstract of paper by G. A. Jellicoe, and discussion.

AMERICAN CITY, 1944 May, pp. 63-6 :
 Small city parks for community use : how neighbourhood parks meet public needs. Article by M. Sewell, landscape archt. Illusd.

ARCHITECT AND BUILDING NEWS, 1944 Sept. 15, pp. 168-9 :
 The Avenue. Notes and illustns. of tree planting.

Accessions to the Library

1944-45—I

Owing to the urgent need to economise space this list now records only new publications, excepting old publications having reference to current demands, e.g. on planning and topography. The others are summarised at end under "Older Works."

For economy of space the following also are now generally excluded from the list : (1) Year-books, lists of members, &c. ; (2) extracts from periodicals, and reprints of periodical articles already noted in the REVIEW OF PERIODICALS ; (3) Government leaflets of slight or transitory interest. Full particulars are available in the library.

Books presented by the publishers for review marked R.
 Books purchased marked P.

*Books of which there is at least one copy in the Loan Library.

ARCHITECTURE

WARE (DORA) and BEATTY (BETTY) 03 : 72
 *A Short dictionary of architecture. Including some common building terms.

7 $\frac{1}{2}$ " 109 pp. Lond. : Geo. Allen & Unwin. 1944. 6s.
 Presented by Mr. John Gloag [Hon. A.], & R. Inf. file 72 : 37 (07) (44) 014.5

PARIS : ÉCOLE (NATIONALE SUPÉRIEURE) DES BEAUX-ARTS
 Concours d'architecture :

Index to vols. for sessions 1920-21 to 1938-39. In English. By John D. Potts.

typescript. 13". 1944.
 Presented by the Compiler [A.].

HISTORY

72.03 (42).025 + 91 (42) : 711.435/437

GODFREY (WALTER H.)

*Our building inheritance : are we to use or lose it ?

8 $\frac{3}{4}$ " 87 pp. + pls. Lond. : Faber & Faber. 1944. 10s. 6d. R. & P. (2).

HARVEY (JOHN H.)

*Henry Yevele c. 1320 to 1400. The life of an English architect. 8 $\frac{3}{4}$ " x + 86 pp. + pls. Lond. : Batsford. 1944. 15s. R. & P. x MS.

GROVE (DONALD E.)

72.033.5 (42.48) : 92 V

The Work of John Vesey Bishop of Exeter at Sutton Coldfield. (Thesis awarded distinction in Final Examination, July.)

typescript, Pencil D. & Ph. 12 $\frac{3}{4}$ ". [1943 or '44.]

Presented by the Author.

HAMLIN (TALBOT)

72.036.3 (73)

Greek revival architecture in America : . . . important trends in American architecture and American life prior to the war between the States. Together with a list of articles on architecture in some American periodicals prior to 1850 by Sarah H. J. S. Hamlin &c. 9 $\frac{1}{4}$ " xl + 439 pp. + front. + xciv pls. (backed). Lond., N.Y., &c. : O.U.P. 1944. (\$7.50.) R.

NEW YORK : MUSEUM OF MODERN ART

72.036.6 (73)

Built in U.S.A. 1932-1944. Elizabeth Mock, ed.

9 $\frac{3}{4}$ " 128 pp. New York. 1944. R.

ROBERTSON (HOWARD)

72.036.6.01

*Architecture arising.

8 $\frac{3}{4}$ " 125 pp. + pls. Lond. : Faber & Faber. 1944. 10s. 6d. R. & P. (6).

PROFESSIONAL PRACTICE

WOODFALL ()

72.08 : 347.23

Law of landlord and tenant.

24th ed. :

Cumulative suppt. No. 4. Emergency legislation and recent cases to June, 1944.

8". xii + 180 pp. Lond. : Sweet & Maxwell, Stevens. 1944. 10s. P.

72.08 : 347.23] 69.059.2

+ 699.895 : 72.025.1] 347.434

YOUNG (CLYDE) and ENGEL (BERNARD)

*War damage and dilapidation assessments. A practical manual &c. 6 $\frac{1}{2}$ " viii + 150 pp. Lond. : Spon. 1944. 8s. 6d. R. & P. (2).

SWARBRICK (JOHN)

Inf. file 72.08 : 347.23] 696.98

Swarbrick zenith daylight factor grille &c.

" " perspective chart.

2 sheets, each 20" x 14 $\frac{3}{4}$ ", folded. Lond. [1944 or earlier.]

Presented by the Building Research Station.

Inf. file 72.08 : 347.23] 940.5

GREAT BRITAIN : PARLIAMENT—ACTS

Validation of War-time Leases Act, 1944. [7 & 8 Geo. 6. Ch. 34.]

9 $\frac{3}{4}$ " Lond. : H.M.S.O. 1944. 1d. P

72.08 : 347.234.1] 940.5 binder
 MINISTRY OF HEALTH 72.08 : 347.234.1] 940.5 : 69.059.2
 Repair etc., of requisitioned property. (Circular 87/44.)
 leaflet, dupl. typescript. 7". 1944. R. (2).
 CRESWELL (H. B.) 72.08 : 82—3

*The Honeywood settlement. A continuation &c.
 Reprint. 7½". 214 pp. Lond.: Faber & Faber.
 1930 (1944). 7s. 6d. R.
 To Loan Library.

WILLIS (A. J.) 72.083.123
 An Example in quantity surveying.
 3 pts., 9½", (pt. ii) × 12½", + 3 pls. (drawings), folded, all in case.
 Lond.: Crosby Lockwood, for author, 3 Denbigh Road, W.13.
 1944. £1 5s. R.

Pt. i: Dimensions and commentary.
 ii: Abstract.
 iii: Bill.

72.089 arch file
 MINISTRY OF HEALTH 72.089
 Licensing of building work in London. [Control of Building
 Operations (No. 2) Order. Limit to £10 in London.] (Circular
 133/44.)

dupl. typescript. 8½" × 7". 1944. R.
 Enclosing [MINISTRY OF WORKS] Control of civil building, Defence
 Regulation 56 A—S.R. & O. &c., and M. of W., Emergency Powers
 (Defence), Control of building operations &c.

72.089 arch file
 [MINISTRY OF WORKS] 72.089
 Control of civil building. Defence regulation 56 A—S.R. & O.
 1944, No. 1112. (C.L.A. 1.) Licensing by local authorities in
 London Civil Defence Region of building works costing more than
 £10, but not more than £100. Notes for guidance.

pam. 8½". [Lond. 1944.] R.
 Enclosed in MINISTRY OF HEALTH Licensing of building work in
 London.

72.089 arch file
 MINISTRY OF WORKS 72.089
 Emergency powers (defence). Control of building operations.
 The C—of B—O— (No. 2) Order, 1944, &c. (Statutory Rules and
 Orders, 1944 No. 1112.) [Reduction of unlicensed expenditure in
 London to £10.]

leaflet. 9½". Lond.: H.M.S.O. 1944. 1d. R.
 72.089 arch file
 72.089 + 69.08 : 940.5
 Emergency powers (defence). Control of building and civil engineer-
 ing contracting undertakings. The B— & C—E— Labour (Returns)
 Order, 1944, &c. (Statutory Rules and Orders, 1944 No. 1116.)
 leaflet. 9½". Lond.: H.M.S.O. 1944. 1d. R.

BUILDING TYPES GENERALLY, INCLUDING PLANNING

Inf. file 72.095 [693.06 : 389.6
 AMERICAN STANDARDS ASSOCIATION: EXECUTIVE COMMITTEE OF
 ... PROJECT A 62

Modular planning as related to building design. An explanation
 for the architect and engineer of the application to building plans
 and details of dimensional coordination as provided by ... Project
 A 62, sponsored by the American Institute of Architects and the
 Producers' Council. (P—D—, Bulletin, No. 46. 1944—Issue 1.)
 pam. 11" × 8½". Washington: Producers' Council. 1944.
 Presented by the Association.

MEMBERS SERVING WITH THE FORCES

KILLED

KING, W. A. [S.], Lieut. R.E.
 VERDON, R. B. [A.], Lieut. R.E.

MISSING

BINYON, R. B. [A.], Capt. R.E. (Airborne).

PRISONERS OF WAR

BREESE, D. A. [S.], Lieut. R.E.
 GEORGE, W. N. B. [A.], 2nd Lieut. R.A.

DECORATIONS AND DISTINCTIONS

BAILEY, D. C. [A.], Major R.E., awarded M.B.E.
 CHRISTIE, R. J. Bayne [A.], Major R.E., awarded M.B.E.
 FOSTER, R. O. [A.], F/Lieut. R.A.F., Mentioned in Despatches.
 JOHNSON, N. L. [A.], F/Lieut. R.A.F., awarded Certificate for
 Good Service. Mentioned in Despatches.
 OSBURN, W. J. A. [A.], F./Lieut. R.A.F., Mentioned in Despatches.

(CIVIL)

COLONIAL OFFICE Inf. file 725 : 624/628 (729)
 Report of the West Indian Conference ... Barbados ... 1944.
 (Colonial No. 187.) (Includes Committee report iv: Planning of public
 works for the improvement of ... housing and public health.)

pam. 9½". Lond. 1944. 6d.
 Presented by Mr. Leo Desyllas [A.].
 Planning in the West Indies. Report of the Committee &c.
 Jnl. R.I.B.A., 3 S. li, 1944 (Oct.), pp. 317-6.

[ILLUMINATING ENGINEERING SOCIETY] Inf. file 725.1 : 696.93
 Lighting reconstruction pamphlets:
 No. 2. The Lighting of public buildings. General considerations &c.
 pam. 8½". Lond. [1943.] R.
 × MS.

GOWANS (A. A.) 725.193
 The Design of waterworks buildings. (Thesis for Final Examination,
 July.)

typescript & Ink D. 13". 1944.
 Presented by the Author.

STATHAM (S. H.) × MS.
 Car park buildings: a thesis &c. (Thesis for Final Examination,
 July 1944.) 725.38

typescript, D. & Repr. 10" × 8". 1943.
 Presented by the Author.

DAWBARN (GRAHAM) 725.39
 *Some factors in the design of civil land aerodromes.

pam. 12". n.p. [1944.]
 Presented by the Author [F.] (2).

AEROPLANE, journal Inf. file 725.39 : 940.5344
 Airports for London. (24 Dec. 1943.)

Air transport. (11 Feb.)
 [2—beginning lost]; Air transport. (5 May.)
 4 extracts. 11½". [Lond.] 1943-44. Presented.

HOSPITAL YEARBOOK 725.511 (058) (73)
 ... The H—Y—. ... Hospital purchasing file. Directory of
 hospital products &c.

22nd ed. The H—Y—. 1944 H—P— &c.
 11½". Chicago: Mod. Hosp. Pubg. Co. [1944.]

Chaps. on Construction, materials and plant equipment, and
 Planning and reference data.

Presented by the Publishers.

Inf. file 725.823.93 + 725.823.93 : 696.93

BRITISH DRAMA LEAGUE
 Planning and lighting the stage in small halls and little theatres.
 Issued for the guidance of architects and others. (From Drama,
 journal.) [By Angus Wilson.]

pam. 9½". Lond. [1944 or earlier.] 6d. P.
 MORRELL (J. B.) 725.945 (42.74 Y) + 726.825 (42.74 Y)
 York monuments. (The Arts and crafts in York series.)

11" × 8½". viii + 131 pp. incl. xc pls. Lond.: Batsford,
 for Yorkshire Gazette. [1944.] £3 3s. R.

(RELIGIOUS)

VICTOR (NATALIE) and SMYTHE (MABEL) 726.54 (42.25 L)
 Some notes on the history of S. Michael-in-Lewes. (From Parish
 Magazine.)

pam. 8½". Hove: Shirley Press. 1940.
 Presented by Mr. B. A. P. Winton Lewis [A.].
 (To be continued.)

Notes

ARCHITECTURAL SCHOOLS

FOR EX-SERVICE MEN AND WOMEN

Facilities for full-time training in architecture exist at the following Schools of Architecture which are recognised for exemption from the Intermediate Examination or the Intermediate and Final Examinations of the Royal Institute of British Architects:—

- The Aberdeen School of Architecture, Robert Gordon's Technical College, Aberdeen.
- The Birmingham School of Architecture, The College of Arts and Crafts, Margaret Street, Birmingham, 3.
- The R.W.A. School of Architecture, 25 Great George Street, Park Street, Bristol, 1.
- The School of Architecture, University of Cambridge, 1, 2 and 3 Scone Terrace, Cambridge.
- The Welsh School of Architecture, The Technical College, Cardiff.
- The School of Architecture, The College of Art, Dundee.
- The School of Architecture, Edinburgh College of Art, Lauriston Place, Edinburgh, 3.
- The Glasgow School of Architecture, The Royal Technical College, George Street, Glasgow, C.1.
- The School of Architecture, Hull College of Art and Crafts, Anlaby Road, Hull.
- The Leeds School of Architecture, Woodhouse Lane, Leeds, 2.
- The School of Architecture, The College of Art, Leicester.
- The Liverpool School of Architecture, University of Liverpool, Liverpool, 7.
- The School of Architecture, The Architectural Association, 34-36 Bedford Square, London, W.C.1. (War-time address: The Mount House, Hadley Common, Herts.)
- The Bartlett School of Architecture, University of London, University College, Gower Street, London, W.C.1. (War-time address: at St. Catharine's College, Cambridge.)
- The School of Architecture, The Polytechnic, Regent Street, London, W.1.
- The Department of Architecture, The Northern Polytechnic, Holloway, London, N.7.
- The School of Architecture, University of Manchester, 244 Oxford Road, Manchester, 13.
- The School of Architecture, King's College (University of Durham), Newcastle-upon-Tyne, 2.
- The School of Architecture, The College of Art, Waverley Street, Nottingham.
- The School of Architecture, Oxford School of Art and Crafts, Church Street, St. Ebbe's, Oxford.
- The School of Architecture, Southern College of Art, Portsmouth Centre. (War-time address: at The School of Art, Winchester.)
- The Department of Architecture, The University, Sheffield, 10.
- The School of Architecture, The Municipal College, Southend-on-Sea.

All students are advised whenever possible either to take a full-time course at a Recognised School of Architecture with a view to qualifying for exemption from the R.I.B.A. examinations, or, if they have already been in attendance at a Recognised School of Architecture, to return there to complete their course.

The attention of students is drawn to the Government's Further Education and Training Scheme, particulars of which, and the necessary form of application, may be obtained direct from the Appointments Department of the Ministry of Labour and National Service, Sardinia Street, London, W.C.2.

If students cannot for any reason either attend or return to a Recognised School of Architecture to undertake or complete a course, but have to take the R.I.B.A. Intermediate, Final or Special Final Examinations externally, they should get into touch with the Headmaster of the nearest Recognised School of Architecture. The Headmaster of the Recognised School will give such students guidance and advice about the educational facilities available for part-time or evening study, either in his own school or in other institutions in the locality. In certain cases the Recognised Schools will be able to offer instruction in all or some of the subjects of the R.I.B.A. examinations, particularly in the subject of architectural design.

In addition to the above arrangements, the Heads of the Recognised Schools will be able to advise about the arrangements made for refresher courses to meet the needs of those already qualified but who desire further instruction in subjects relating to architectural practice and procedure.

A.A. SCHOOL HEADMASTER

The Council of the Architectural Association announces that it has appointed Mr. Raymond Gordon Brown [A.J., A.A. Dipl., at present a Major in the Parachute Regiment, to be Principal of the A.A. School of Architecture. Application has been made for his release from the Army in the near future in order to organise the post-war school.

Mr. Gordon Brown is thirty-two years of age, and a South African by birth. He was educated at Haileybury College and Clifton College. After commencing the study of Architecture in Natal, he became a student of the A.A. School. After leaving the school he studied for some time with the celebrated Dutch architect Dudok, and then became chief assistant to Sir Walter Tapper, R.A. Later he became chief assistant to Professor A. E. Richardson, A.R.A., and Mr. C. Lovett Gill [F.J.]. On the outbreak of war he was starting in private practice.

In 1939 he volunteered for the army, joining as a private. He was commissioned in 1940 to the Queen's Royal Regiment. Later he served as a staff officer under General Crerar, who put his name forward for the Staff College which he passed in 1943. He then volunteered for the Parachute Regiment. On D Day he led a special assault force in an attack on a heavily defended battery and served with the Airborne Division throughout its campaign.

FEES FOR SITING EMERGENCY FACTORY-MADE HOUSES

The Ministry of Health recently notified Local Authorities (in Circular 165/44) that the R.I.B.A. and the Allied Societies have undertaken to put authorities in touch with architects ready to undertake the preparation of lay-outs for sites required either for the provision of temporary bungalows or of permanent houses and of house plans required for permanent houses.

The Council of the R.I.B.A. have now approved the following Scale of Fees for the Siting of Emergency Factory-made Houses. For permanent housing, the Scale of Fees for State-aided Housing Schemes approved by the R.I.B.A. Council in May, will apply.

THE SCALE

This scale applies to the siting of emergency factory-made houses where the site will revert to an open space. Where the site is to be used eventually for permanent housing it will be necessary for the architect to prepare a lay-out for the permanent housing before dealing with the temporary houses and in this case an additional fee will be charged.

The Scale throughout is exclusive of reasonable travelling and out-of-pocket expenses and printers' charges for additional copies of drawings and documents.

A. LAY-OUT

For taking instructions, negotiating with Ministries, Government Departments, Regional and Local Authorities, including the preparation of two copies of drawings required, preparing preliminary sketch to 1/2,500 scale and finished drawing of the lay-out to 1/500 scale the fees are to be:—

For the first 25 dwellings	£1	15	0	a dwelling
.. .. next 25 ..	£1	5	0	..
.. .. " 25 ..	£1	2	6	..
.. .. " 25 ..	£1	0	0	..
.. .. " 25 ..		17	6	..
.. .. " 25 ..		15	0	..
.. .. " 25 ..		12	6	..
.. .. " 25 ..		10	0	..
.. .. " 25 ..		7	6	..
All over 225 ..		5	0	..

B. CONSTRUCTIONAL WORK FOR ROADS AND SEWERS

For making constructional drawings of the roads and sewers and preparing specification from a standard specification the fees are to be:—

£1 15 0 a dwelling.

If general supervision by the architect is required this charge is to be increased to £2 5s. a dwelling.

C. ADDITIONAL SERVICES NOT INCLUDED UNDER A AND B ABOVE

The following services for which the architect may be employed will be charged on a quantum meruit basis:—

- Negotiations relating to the site.
- Making surveys, measurements and plans of the site or existing buildings and taking levels.
- Making drawings for and negotiations with Ground Landlords and Public Authorities not referred to above.
- Making arrangements in respect of party-walls, rights of light and other easements.

Additional work involved where the work is carried out under more than one building contract.

Making extra drawings for the client, contractors, sub-contractors or Clerk of Works' use.

Work in connection with litigation and arbitration.

D. ABANDONED WORKS

Where any of the architect's services have been rendered under Sections A and B of this scale and the whole or part of the proposed scheme is subsequently abandoned, reduced fees shall be payable in accordance with the amount of work done.

17 October 1944.

WAR DAMAGE TO HISTORIC BUILDINGS

A number of buildings of special architectural or historic importance have suffered damage in the air raids on this country. The question of their treatment under the War Damage Act has formed the subject of discussion between the War Damage Commission and other appropriate bodies, and the general policy to be observed is now set out in a new Direction which the Treasury has issued under Section 20 (1) of the War Damage Act.

Under this Direction it is laid down that, in the public interest, payments in respect of war damage to buildings which the Commission is satisfied are of special architectural or historic importance shall be of such kind as to secure, so far as possible, the preservation of the character of such buildings. Accordingly, the Commission is authorised, in suitable cases, to make a cost of works payment for the repair of the building where this can be done without detracting from its character, even though it might, technically, be regarded as a total loss under the provisions of the Act and therefore subject only to a value payment.

Any submission that a building should be dealt with under the terms of this Direction must first be made to the War Damage Commission, which will consult with the Minister of Town and Country Planning (in Scotland the Secretary of State) and the Minister of Works, and where necessary inquire from the Royal Fine Art Commission (or the Royal Fine Art Commission of Scotland) whether it is prepared to certify that the building is of sufficient merit to justify the application of the Direction. The duty is laid upon the Commission of satisfying itself that all necessary consents have been obtained for the works of making good the war damage, and of ascertaining that the exercise of the powers in any particular case will not involve injustice to any person interested in the question of the kind of payment to be made.

AN A.R.C.U.K. PROSECUTION

Harold W. Hoggood, of 45 Langton Street, Preston, was prosecuted at Preston Magistrates' Court on 6 November by the Architects Registration Council of the United Kingdom, under Section 1 of the Architects Registration Act, 1938. He was fined £15, with £6 10s. costs. The defendant is well known in the neighbourhood and is alleged to have done important work as a surveyor. He wrote letters of a touting character, in which he held himself out as an architect, to builders in the blitzed areas in different parts of the country.

Correspondence

Technical Information for Demobilised Architects

The Chairman of the Demobilisation Committee has sent the following letter to the technical papers:—

Royal Institute of British Architects,
66 Portland Place, London, W.1.
6. 11. 44

The Editor, THE JOURNAL, R.I.B.A.
Sir,

Architects serving with the Forces have expressed their concern about the many difficulties likely to be encountered when they resume their professional activities. Among these difficulties is that of acquiring as quickly as possible all available information about materials, equipment and services at present available or likely to become available as soon as circumstances permit.

Most pre-war catalogues will be out of date—if not already disposed of as salvage—and the process of building up an adequate library of trade catalogues and publications is likely to be long and tedious.

Much time and trouble will be saved if manufacturers are prepared to circulate their publications to architects as and when they return to their professional work, but a period must of necessity elapse before

the R.I.B.A. Kalendar or other publications can be brought up to date with the names and addresses of those who have been serving overseas or elsewhere.

I shall, therefore, be glad to hear from those firms who would undertake to help demobilised architects in this way, and if the response so warrants, to arrange for the publication, either weekly or monthly, of a list of the names and addresses of members desiring this service immediately the Institute is notified of their return from the Forces.

Two other matters are referred to in letters from serving members, viz., the desirability of some form of standardisation in the preparation of catalogues and information sheets to facilitate filing, and the greater value of drawing office data, fixing details, and other technical information by comparison with the more usual photographs of executed work.

The first of these matters is at present under consideration by the British Standards Institution at the request of the R.I.B.A.; the second is recommended to the serious consideration of manufacturers.

Yours faithfully,

THOS. E. SCOTT,
Chairman,
R.I.B.A. Demobilisation Committee.

Obituary

CHARLES BULMAN PEARSON [F.].

We regret to record the death on 19 July of Mr. C. B. Pearson in his sixty-eighth year. Mr. Pearson received his early training with the late E. Howard Dawson [F.], of Lancaster, and studied locally, winning several national prizes. He was a Godwin Bursar and R.I.B.A. Tite Medallist.

Among his principal works were schools and hospitals in Lancashire, where he was well known, and the rebuilding of the central pier and pavilion at Morecambe. He won many competitions and exhibited at the Royal Academy on 19 occasions.

Mr. Pearson was a partner in the firm of C. B. Pearson & Son, of Lancaster, and is succeeded by his son, Mr. C. E. Pearson [F.].

HERBERT F. T. COOPER [F.]

Herbert F. T. Cooper, who died on 13 October last at the age of 70, will be mourned by a wide circle of friends and colleagues.

He was a man of many and varied interests, and in addition to being a most capable and versatile architect and planner, his general activities and interests embraced the whole range of arts and crafts, including furniture and decoration. He was greatly influenced by the William Morris, Philip Webb and W. R. Lethaby school and was a mine of information on that period, including the literature which related to it. He was deeply interested in good music, good books and fine painting and was a competent and successful gardener.

During his later years he was devoted to the study of Japanese colour prints and on this delicate and intricate branch of the arts he became a recognised authority. On occasion he was referred to by the Prints Department of the British Museum, for whom he prepared a special brochure. His collection of prints is probably unique and contains many treasures of great artistic merit.

His active years as an architect were mainly spent in the Architect's Department of the London County Council, where he was engaged during the earlier part of his career on the design of fire stations, and later on schools buildings and all types of hospital construction.

He remained with the County Council until 1939, when he retired. During this period he individually designed and carried out a very large number of buildings for the Council and his influence is apparent in many others. Several private houses were designed by him, including his own house.

He entered into each new project with enthusiasm, sparing no pains to get the result desired and thereby stimulating influence on the younger generation, with whom he came in contact.

The range of his activities comprised fire stations, schools, hospital construction, including the various integral parts of some of the largest municipal London hospitals. Examples of his earlier works are the fire stations at Euston, Hammersmith and Clerkenwell, and, latterly, St. Martin's School of Arts and Crafts, Charing Cross Road; the City Literary Institute, Drury Lane, etc. It should be mentioned that all these buildings are on difficult and restricted sites and the results attained speak for themselves.

Nothing less than the best satisfied Cooper and in his passing the profession loses a gifted member of the Institute, a painstaking artist, a delightful colleague and one who, in his whole life and attitude, strove to encourage the beautiful.

W. E. BROOKS [F.].

Membership Lists

ELECTION: 14 NOVEMBER 1944

The following candidates for membership were elected on 14 November 1944:—

AS FELLOWS (11)

CRAMPSON: ALFRED [A. 1908], Southport.
CROSSLAY: GEORGE [A. 1920], Huddersfield.
HOWARD: PERCY [A. 1914], Manchester.
JARVIS: HAROLD EDGAR, Capt. R.E. [A. 1922], Darlington.
JOHN: LEWIS, M.A. (Liverpool), B.Arch. (Liverpool) [A. 1922], Cardiff.

LOMAS: LESLIE CLARSON, Capt. R.E. [A. 1939], Southport.
SEIFERT: RUBIN, Major R.E. [A. 1934].

And the following Licentiates who are qualified under Section IV, Clause 4(c) (ii) of the Supplemental Charter of 1925:

FERRY: ERNEST FRANK.
HOPKIN: ROBERT GEORGE, Blackrock, Co. Dublin.
NEIGHBOUR: SYDNEY WILLIAM, O.B.E., T.D.
SOMERSET: JAMES HERBERT.

AS ASSOCIATES (22)

CHALK: DERRICK WILBIE, Dip.Arch. (Manchester), Hyde, Cheshire.
COLE: DOUGLAS JAMES, Dip.Arch.
FALCONER: PETER SERRELL, Cheltenham.
FELGATE: FREDERICK LEONARD.
GILMAN: THOMAS FRANK, B.Arch., Hamilton, New Zealand.
GOWAN: ALEXANDER ADAIR, Glasgow.
HASTINGS: ALFRED EDWARD JOSEPH.
HINDLE: IAN MACFARLINE, Southport.
LAWSON: THEODORE FRASER, P.A.S.I.
LEACH: ALEXANDER, Heald Green, Cheshire.
MALCOLMSON: REGINALD FRANCIS, Portstewart, Co. Londonderry.
MASON: THOMAS LOUIS KATNE, Belfast.
PARKER: CHARLES KENNETH, Oldham.
POWELL: ARNOLD JOSEPH PHILIP.
RALPH: STANLEY.
RENDELL: FREDERICK CHARLES.
REYNOLDS: MISS JOSEPHINE PRESTON, B.Arch., Wallasey.
TAYLOR: MRS. MARGARET REID.
TURNER: MISS DOROTHY MAUD EMBREE, B.Arch., Liverpool.
TURNER: REGINALD BRANDRICK, Dip.Arch., Macclesfield.
TWISLETON-WYKEHAM-FIENNES: The Hon. LAURENCE JOHN EVELYN, Babbury.
WILLIAMS: MERLYN CHRISTOPHER, Dip.Arch. (Cardiff), Bridgend.

AS LICENTIATES (42)

BELL: WILFRED, Lieut. R.E., Harrogate.
BRADLEY: FRANK, Manchester.
BROWN: CHARLES BERNARD.
BURLEY: SIDNEY FREDERICK.
CAUSTON: THOMAS WILLIAM.
CORNFORTH: REGINALD ROYSTON.
CRICKSHANK: RONALD DAVIDSON, Aberdeen.
DOBSON: JOSEPH JOHN, West Hartlepool.
FIELD: CECIL WILLIAM.
GILLESPIE: WALTER HENDERSON, Grangemouth.
GRIGG: JOHN ALFRED, Sutton Coldfield.
HOWARD: JOHN STUART, Leamington Spa.
HOWITT: SYDNEY GERALD, Notts.
JAMIESON: GEORGE LINDSAY AULDJO, Edinburgh.
JONES: FREDERICK WILLIAM.
LAMBORN: ROBERT ALAN, Capt. R.E., Reading.
LAWRIE: KENNETH, Tunstall.
LAWTON: ERIC ARTHUR, Cottingham, E. Yorks.
MCGARRIGLE: THOMAS, Rugby.
MACKENZIE: MORTON ANGUS, Newcastle-upon-Tyne.
MEADEN: EDGAR THOMAS, Birmingham.
MEREDITH: IVOR EMLYN, Lichfield.
MUSTARD: JOSEPH WILLIAM, Newcastle-upon-Tyne.
NICHOLIS: DOUGLAS RICHARD, Major R.E., Chard.
NIMMO: CECIL HARRY FRISTON, Glasgow.
NORTHMORE: SOLOMON ROY, Plymouth.
POINTON: HAROLD JESSE, Hanley.
RICKETTS: ERIC JAMES, Weymouth.
RUSHBROOK: *LESLIE WILLIAM, Glasgow.
RUSSELL: LOUIS WILLIAM, Canterbury.
SMITH: ALFRED EDWARD.
SWAN: MAURICE ARTHUR.
TAYLOR: WILLIAM DENNIS, Long Eaton.
TIMBRELL: SIDNEY PERCIVAL, Wolverhampton.

TUPPER: JOHN PATRICK, Bristol.
TYRRELL: RICHARD HENRY.
UREN: CLARENCE.
VIDLER: JAMES WILLIAM, Cambridge.
WISE: ALFRED HENRY, Capt. R.E., Exeter.
WORCESTER: PAUL REGINALD, Wakefield.
WORRELL: LOUIS HENRY, Taunton.
WYLLIE: JAMES ALEXANDER, Glasgow.

APPLICATIONS FOR MEMBERSHIP

ELECTION: 16 JANUARY 1945

An election of candidates for membership will take place on 16 January 1945. The names and addresses of the candidates, with the names of their proposers, found by the Council to be eligible and qualified in accordance with the Charter and Bye-laws are herewith published for the information of members. Notice of any objection or any other communication respecting them must be sent to the Secretary, R.I.B.A., not later than Saturday, 13 January 1945.

The names following the applicant's address are those of his proposers.

AS FELLOWS (4)

BROOKE: DONALD [A. 1924], 39 Manor Avenue, Crosby, Liverpool.
23. Prof. L. B. Budden, Prof. Sir Charles Reilly and F. N. Velarde.
DAVIES: EDWARD FOULKES, B.Arch. (Liverpool) [A. 1928], Sch. of Arch., Robert Gordon's Technical Coll., Aberdeen; Amåtola Hotel, Great Western Road, Aberdeen. A. B. Gardner, A. G. R. Mackenzie and J. B. Nicol.
HOARE: ERIC LESTER TREADAWAY [A. 1936], 40 Great James Street, Bedford Row, W.C.1; 1 Home Farm Close, Thames Ditton. Applying for nomination by the Council under Bye-law 3 (d).
WARD: RONALD, Major R.E. [A. 1937], formerly of 33 St. George's Road, Westminster, S.W.1. F. R. Hiorns, A. Saxon Snell and Rees Phillips.

AS ASSOCIATES (6)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

FARROW: GEOFFREY DENIS (King's Coll. (Univ. of Durham), Newcastle-upon-Tyne), 9 Cutting Street, Seaham, Co. Durham. W. B. Edwards, F. Willey and W. Milburn.
HUNT: NORMAN HABGOOD (The Poly., Regent Street, London), 5 Colne Road, N.21. E. C. Scherrer, T. H. Hughes and R. F. Reekie.
MAROIS: MISS FRANCES MARY (Edinburgh Coll. of Art), Lingmoor, Howbeck Road, Oxtou, Birkenhead. A. A. Foote, Leslie Grahame-Thomson and J. R. McKay.
MURRAY: JOHN OLIVER BENEDICT, B.Arch. (Univ. Coll., Dublin), "Kingston," Cowper Road, Rathmines, Dublin. Vincent Kelly, H. G. Simms and J. J. Robinson.
PARKER: WILLIAM NORMAN, B.Arch. (Liv.) (Univ. of Liverpool), 223, The Wheel, Ecclesfield, Nr. Sheffield. Prof. L. B. Budden, Robert Atkinson and A. F. B. Anderson.
YARROW: ALFRED RICHARD, Capt. [Final], formerly of 10E Portman Mansions, Baker Street, W.1. S. J. B. Stanton, Dr. H. V. Lancaster and T. A. Lodge.

AS LICENTIATES (7)

AUSTIN: HORACE JOHN MINARD, 41-45 Gracechurch Street, London; 37 Tranmere Road, Whitton, Middlesex. Thomas Spencer, A. J. Davis and C. P. Hawley.
BRERETON: JOHN, Chief Assistant, Borough of Barry, South Wales; 19 Brereton Avenue, Bebbington, Cheshire. Applying for nomination by the Council under Bye-law 3 (d).
HEATH: RALPH LESLIE, Messrs. Harrods, Ltd., 87-135 Brompton Road, S.W.1; 47 Aragon Road, Kingston-on-Thames, Surrey. Applying for nomination by the Council under Bye-law 3 (d).
INGRAM: DAVID ERIC MAJOR, Major R.E., 129 Sheen Court, Richmond, Surrey. Applying for nomination by the Council under Bye-law 3 (d).
MILLINGTON: ARTHUR HENRY, 54, Boldmere Road, Eastcote, Pinner, Middx. G. B. Hobbs, H. Wilson-Wood and F. Q. Farmer.
TAGGART: REDMOND THIBEAUD, Commander R.N.V.R., late of Scottish Provident Buildings, Belfast; 10 Malone Park, Belfast, Northern Ireland. J. R. Young, Frank McArdle and T. R. Eagar.
WAITE: ALWYN, Ministry of Works; The Gables, Calder Grove, Nr. Wakefield, Yorks. S. V. Smith, G. T. Gardner and E. L. Gale.

ELECTION: 10 APRIL 1945

An election of candidates for membership will take place on 10 April 1945. The name and address of the overseas candidate, with the name of his proposer, are herewith published for the information of members. Notice of any objection or any other communication

respecting him must be sent to the Secretary R.I.B.A. not later than Saturday, 24 March 1945.

AS ASSOCIATE (1)

The name of a school or schools after a candidate's name indicates the passing of a recognised course.

GREEN : CLEMONS LANDSEER (Univ. Coll., Auckland, N.Z.), Bank Street, Morrinsville, N.Z. Applying for nomination by the Council under Bye-law 3 (d).

Notices

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next election they should send the necessary nomination forms to the Acting Secretary R.I.B.A. as soon as possible.

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

CESSATION OF MEMBERSHIP

Under the provisions of Bye-law 21 the following have ceased to be members of the R.I.B.A. :—

As Fellow

Cedric Heise Ballantyne

As Associate

Eric Magnus Sodersteen

ELECTION 20 JULY 1942

The election of R. H. Lockwood as an Associate, which was announced in the August 1942 JOURNAL, has been declared void.

INFORMAL MEETING

It will not be possible for Mr. L. H. Keay to give his talk on "Post-War Housing" which had been arranged for Tuesday, 16 January 1945, and there will, therefore, be no Informal Meeting on that evening.

Arrangements have been made, however, for a talk on Tuesday, 2 January, at 5.30 p.m., to be given by Mr. Jacob Crane, Urban Development Director, National Housing Agency, U.S.A. Government, on the subject of "An American looks at British Housing," and all members are cordially invited to attend.

It is hoped to arrange for Mr. Keay to give his talk some time next session.

Competitions

EAST SUSSEX : RURAL HOUSES

The East Sussex Branch of the Rural Districts Councils Association invite members of the South-Eastern Society of Architects to submit designs for a pair of Rural Houses.

Application for particulars to be made, not later than 16 December, 1944 to the Clerk of the Chailey Rural District Council, 31 High Street, Lewes.

Designs to be sent in by 1 March, 1945.

MANOR HOUSE HOSPITAL, GOLDERS CREEN

1. W. F. Howard [F.] (Enfield, Middx.).
2. Nicol, Nicol & Thomas [A.], in association with D. G. Walton [A.] (Birmingham).
3. H. H. Clark [F.] (Reading).

TIMBER HOUSE COMPETITION

TIMBER DEVELOPMENT ASSOCIATION

1. Mr. John P. Tingay [A.].
2. Mr. Ralph Erskine [A.].
3. Mrs. June Bosanquet [A.].

TERRACE HOUSING COMPETITION

NATIONAL HOUSING AND TOWN PLANNING COUNCIL

1. G. K. Findlay.

Five Prizes of £30 each to :—

Courtenay M. Crickmer [F.].

Capt. J. R. Baxter [A.] (Blairgowrie).

V. Collin [L.] and R. Davies [A.] (Blackburn).

F. W. Holder [A.].

L. B. Elson (Nottingham).

Members' Column

PRACTICES AND PARTNERSHIPS

PARTNERSHIP offered in old-established West Country city practice; qualified architect with quantity surveying and valuing experience preferred.—Write Box 2611, c/o Secretary R.I.B.A.

ARCHITECT [F.], West of England, desires partnership relief; good class work.—Box 7114, c/o Acting Secretary, R.I.B.A.

WANTED by F., in Essex, fully qualified Assistant, with possible view to partnership, experienced in hospital, school and domestic work.—Box No. 9114, c/o Acting Secretary, R.I.B.A.

MR. HENRY ROBINSON [A.] is now established in practice at 7 May Street, Belfast, where he would be glad to receive trade catalogues.

MR. W. H. JOHNSON, F.R.I.A.S., has changed his address from 32 St. John's Road, Corstorphine, Edinburgh, to 3 Queen Street, Edinburgh, 2. (Tel. 20564).

MR. B. IVOR DAY [F.] has moved from Halifax House, Bristol, 1, to new offices at 39 Broad Street, Bristol, 1. Telephone : 25655.

MR. DAVID A. WILKIE [F.] has now opened his office at No. 45 Chancery Lane, W.C.2. Telephone : Chancery 6460.

MEMBER [F.], having closed own practice of twenty years' standing for war period, is now released from the Army and is willing to consider active partnership with established firm of good standing.—Box No. 1711, c/o Acting Secretary, R.I.B.A.

MEMBER [L.], with office in Southampton and with increasing practice and prospects, wishes to meet fellow Member, ex-Service preferred, with view to partnership.—Particulars to Box No. 8114, c/o Acting Secretary, R.I.B.A.

ASSOCIATE, age 34, would like to communicate with practising architect, London or South Coast, Southampton district, with a view to partnership.—Please reply to Box No. 1111, c/o Acting Secretary, R.I.B.A.

WANTS AND FOR SALE

We have received a letter from Capt. E. H. Fountain of the S.E.A.C., requesting us to please send any space books or secondhand periodicals on building and architecture, as these are quite unobtainable in his part of the world. They would be very much appreciated and passed on to fellow architects. Anyone able to help should apply for Capt. Fountain's address to the Editor, or hand in such books to the Library for him.

SERVING MEMBER requires architectural journals for "Planning Circle." Will members who can spare copies please send them to Major G. Stokes Burrows, K.E., 13 Field Survey Company, R.E., C.M.F.

MEMBER wishes to purchase copy of the R.I.B.A. JOURNAL of 14 August 1937.—Write, stating price, to W. C. Johnston [L.], 81 Castle Street, Carlisle.

MEMBER has for sale : Unwin, Town Planning in Practice (early edition) and Forshaw and Abercrombie, County of London Plan.—Write Box No. 2911, c/o Secretary R.I.B.A.

On returning from the Middle East, Mr. H. Edmund Doe [A.] has settled at "Oakleigh," Park Road, Loughborough, Leics. (Tel. Loughborough 3554) and would be pleased to receive any available trade literature as he lost all his by enemy action.

WANTED.—Copy of *Modern Architectural Design* by Howard Robertson. Particulars to Box No. 2511, c/o Secretary, R.I.B.A.

MEMBER wishes to sell copy of Adams' *Recent Advances in Town Planning*, price 20s., in new condition.—Anthony Lamb [A.], Nailbourne, Taunton.

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